1996

Single string scale technique and the classic Guitar

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Single String Scale Technique and The Classic Guitar

A Thesis

Presented to

The Faculty of the Department of Music

San Jose State University

In Partial Fulfillment

of the Requirements for the Degree

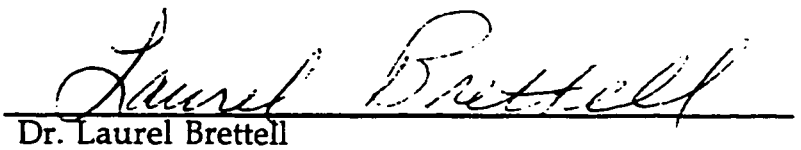
Master of Arts

by

Kenneth J. Andrade

December 1996

APPROVED FOR THE DEPARTMENT OF MUSIC



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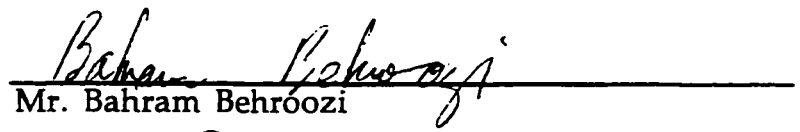

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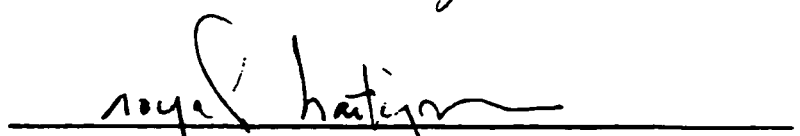

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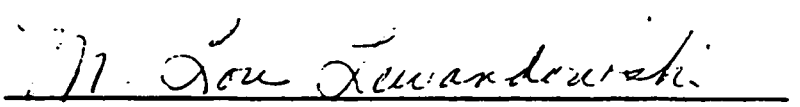

ABSTRACT

Single String Technique and the Classical Guitar

by Kenneth J. Andrade

As a student of the classical guitar, I found that the standard teaching literature for guitar did not prepare me well for either solo or chamber repertory. I found that a basic element of technique was overlooked for the guitar: single string scale studies.

Single string scales and shifting exercises are used by the other strings to develop fluency through their various registers, or positions. I discovered that the harmonic role of the guitar and of its predecessors, caused its technique and technical literature to develop around a relatively fixed hand position.

In this thesis I will outline the development of classical guitar technique from the Renaissance lute and vihuela to the present day, then discuss the major figures in the guitar's development to highlight their contributions and trace their deficiencies, and finally I will present materials I have developed to address the deficiency of single string shifting and scales.

ACKNOWLEDGMENTS

I am deeply grateful to the many people who have made this work possible. It would require a separate document to begin to acknowledge everyone, since so many have given support in my academic career. I wish to thank Bahram Behroozi for his encouragement in this project from the beginning, when I first showed him my experiments in technique, to the present day. My thanks to Dr. Laurel Brettell, for consenting in the midst of utter chaos to chair the committee for this thesis, as well as for making her students feel like family. My thanks to Dr. royal hartigan for taking time under equally harried circumstances to be on my committee, and for his wonderful critique of my text. My thanks to Dr. William George for always having an open door to questions, and for attending every recital ever given at San Jose State. My thanks to Lisa Freedman for help in the preparation of this manuscript and the frenzy of last minute driving to show the manuscript to the committee members. My thanks to my aunt, Rachel Marie Hayes-Perez for both the tangible support of years of piano lessons and a formidable depth of musical knowledge and understanding, and the more intangible support provided by the example and inspiration of her musical dedication and excellence, and love. And finally, my unbounded gratitude to my mother and father, Everett and Gladys Andrade, for their love and support through my lengthy studies.

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Part One
Chapter One

Introduction

The noted classical guitar teacher Aaron Shearer recognized "...that classical guitar instruction has severely lagged behind the sophisticated disciplines of other instruments such as the violin...."[1] As a student of the classical guitar, I found that the standard teaching literature for guitar did not prepare me well for either solo or chamber repertory. I began playing the guitar when I was seventeen years old. After one year of lessons centered around learning chords, I began classical guitar lessons and practiced eight to ten hours daily. In my studies of the guitar, I looked not only at guitar methods, but also at literature for the piano (which I was also studying), violin and cello (since they share some elements of technique as stringed instruments). I found that certain elements of scale technique which are basic to fluency over the range of the guitar were seldom and inadequately addressed on the guitar when compared with these other instruments. My own deficiency in this area was made clear through involvement in a chamber music program at San Jose City College. I found that when reading music with players of other instruments, I was unable to move with fluency through my own instrument. This was personally embarrassing, since I was

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[1]Jim Ferguson, "Aaron Shearer: The Art & Science of Guitar Instruction." Guitar Player, 58.

playing parts edited for guitar. The hours I spent practicing the scales of Segovia or Shearer did not prepare me for playing the guitar with the fluency expected of any chamber musician in rehearsals. I continued looking into materials for the guitar and violin. Neither the classic methods developed in the 1800's nor any masters of guitar including Andrés Segovia (who propagated the Tárrega school) and Abel Carlevaro (who established his own innovations in technique) addressed this issue in their teaching materials. I began to develop materials of my own for the guitar based on the models I found in the violin literature. Initially I used these materials for my own study and later began incorporating them into my teaching. I have since refined and organized these materials to create a new method for guitar.

This thesis is divided into two parts. In the first I outline the major teaching methods developed for the classical guitar, focusing on how they address the development of scale technique, and summarize the major changes in technique for the guitar. I also discuss changes in the conception of the guitar with respect to the use of timbre to achieve musical ends. In the second part I present the materials I have developed to make up the deficiency in that aspect of the technical literature. In this original material, I incorporate the most recent developments in physical technique developed for the guitar by Abel Carlevaro. I have used facsimile sources as much as possible in this research. These are so noted in the Sources Consulted. The material of Part Two is an excerpt from an original guitar method which I am preparing for publication.

Technical Terms in this Thesis

Following is an explanation of terminology and the conventions of notation which are used in this thesis.

Parts of the Guitar

Bridge: A piece of wood, bone or ivory which raises the strings above the body and fingerboard and transmits vibration from the strings to the body of a stringed instrument.[2]

Fret: Rigid strips, usually of gut or metal, which cross the fingerboard at a right angle to the strings of bowed or plucked instruments. A plucked string, which is stopped by a finger against a fretless fingerboard produces a muffled sound. A fret provides a rigid point of contact for the string to be stopped against, and produces a clearer sound.[3]

Nut: A piece of bone or ivory which with the bridge forms the limit of the functional length of a string, and raises the strings from the fingerboard enough to allow open strings to sound freely. The nut is between the peg box and the fingerboard.[4]

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[2]David D. Boyden, "Bridge." The New Grove Dictionary of Music and Musicians, Vol. 3, 277-8.

[3]Ian Harwood, "Fret." The New Grove Dictionary, Vol. 6, 836.

[4]David D. Boyden, "Nut." The New Grove Dictionary, Vol. 13, 455.

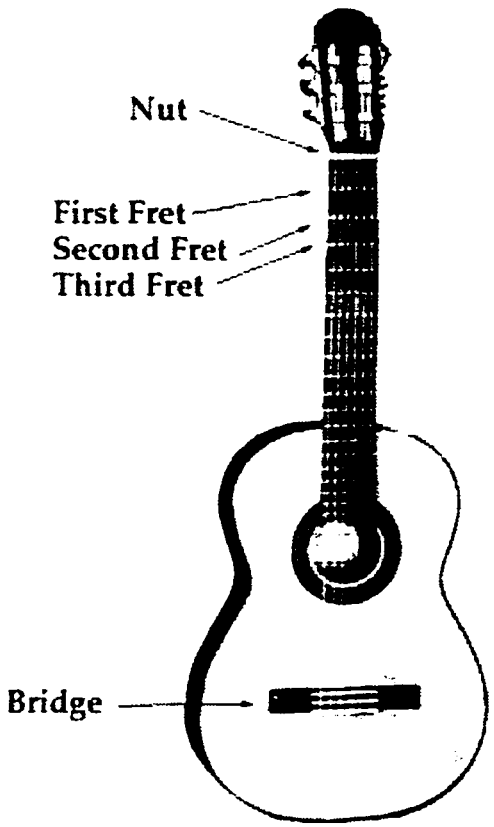

Figure 1 Parts of the Guitar.[5]

General Terms

Barring: The use of a single finger to stop more than one string. In a full bar all six strings are stopped by depressing them with one finger. In a partial bar fewer than six strings are depressed. A bar is indicated with a B (for bar) or a Ca (for *capo tasto,* Italian) followed by a number indicating the position (see below for definition). The number of strings to be depressed is sometimes indicated with a fraction. '1/2B 5' would indicate a bar of strings one through three at the fifth fret (See Ex. 1).

---

[5]Edited from DeVoe Guitar Newsletter. Flamenco Negra guitar built by Lester DeVoe.

Figure 2 Front View of the Bar.[6]

Course: The lute, vihuela, and other early plucked string instruments had either individual strings, like the modern classic guitar, or doubled strings, like the modern twelve string guitar or mandolin, or a combination of single and doubled strings. A *course* is either a single string, or paired strings which function as a unit (groups of three strings were also used, but were not the norm).[7]

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[6]Original photograph.

[7]Ian Harwood, "Courses." The New Grove Dictionary, Vol. 4, 2.

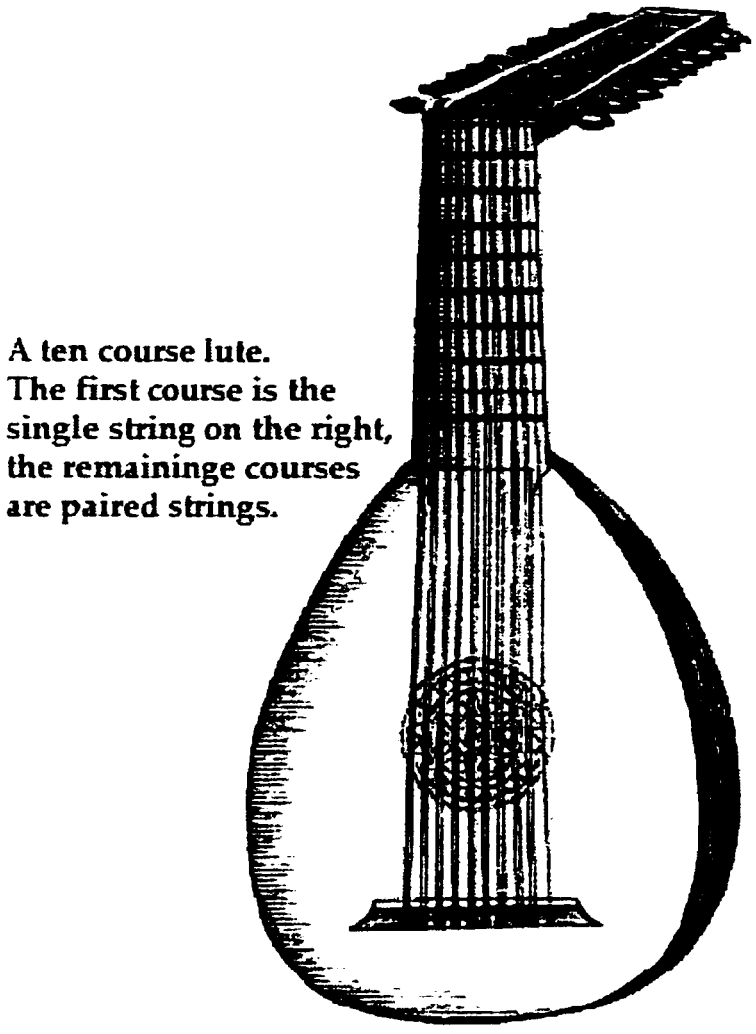


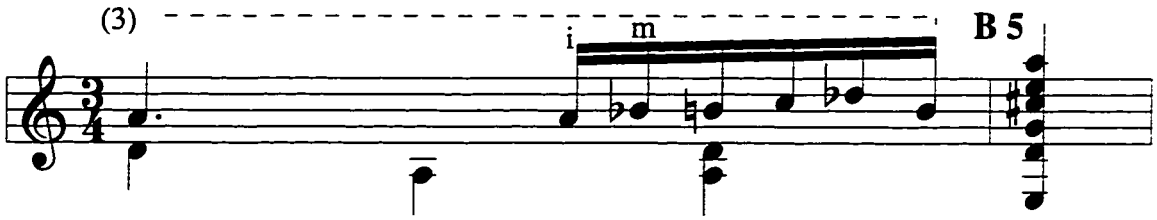
Figure 3 Courses of the Lute.[8]

Fingering: In classical guitar, right hand fingers are abbreviated from the Spanish words for the fingers: p-*pulgar*/thumb, i-*indice*/index finger, m-*media*/middle finger, a-*anular*/ring finger. The left hand fingers are indicated by Arabic numbers: 1-index, 2-middle, 3-ring finger, 4-little finger.

---

[8]Frederic V. Grunfeld, The Art and Times of the Guitar: An Illustrated History of Guitars and Guitarists, 65. [edited from wood cut]

In classical guitar the thumb is not used in the left hand, nor the little finger in the right hand.



Example 1 Guitar Notation.[9]

Free stroke: A stroke in which the right hand fingers touch only the strings being played. The follow through from a free stroke passes from the string being played towards the palm of the hand. This is also known as a *tirando* stroke (Spanish).[10]

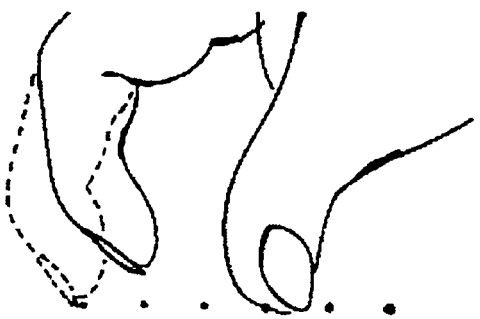


Figure 4 Diagram of a Free Stroke.[11]

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[9]Original Example.

[10]Vladimir Bobri, The Segovia Technique, 46.

[11]Bobri, 46.

Harmonics: On the guitar, harmonics are produced by touching a string while plucking it to suppress the fundamental and any undesired overtones, thus allowing a particular overtone to be clearly heard. Touching a string at half its length without depressing it while plucking it, will cause the overtone of one octave higher than the fundamental of that string to be clearly heard. Doing the same at one third of the string length will produce an octave and a fifth above the strings fundamental.

Position: In classical guitar, this normally refers to which fret the first finger is playing. The frets are numbered ascending from the nut toward the bridge. Either Arabic or Roman numerals are used to indicate position. Position is most often indicated when a *bar*, or *capo tasto*, is employed. Then it is prefaced with the abbreviations 'B' or 'Ca' (See Ex. 1).

Rest stroke: A stroke in which a right hand finger follows through to an adjacent string to stop the finger motion from the string it is plucking. This is also referred to as an *apoyando* (Spanish) or *supported* stroke. This stroke is emphasized in the Tárrega school of playing for articulating rapid scale passages or emphasizing melodic notes from an accompanying texture.[12]

[12]Bobri, 43.

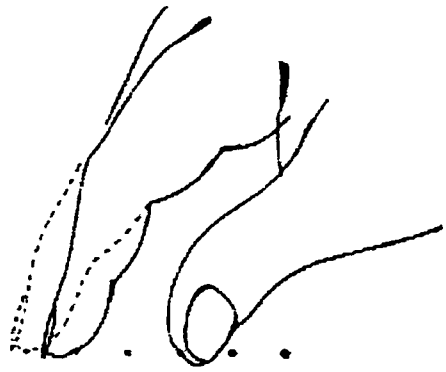
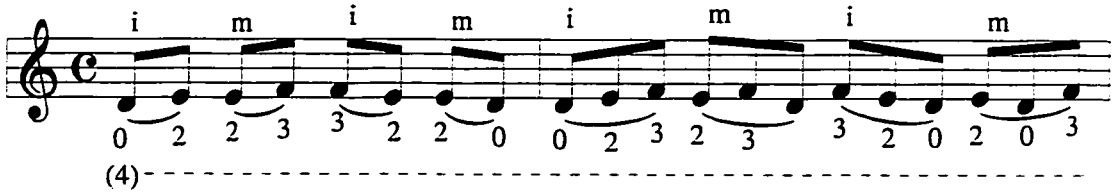


Figure 5 Diagram of a Rest Stroke.[13]

Slurs: A technique in which change of pitch is achieved by the left hand fingers alone, either by sharply stopping a string against the fingerboard, or plucking the string with a finger which is being removed from the fingerboard. Slurs are indicated by phrase markings. In the following examples, the first note of each phrased group is articulated by plucking with a right hand finger. The ascending notes are played by stopping the string with the left hand fingers quickly enough to set the string vibrating. The descending notes are played by plucking the string with the left hand fingers as they are removed from the string.

[13]Bobri, 42.



Example 2 Fingering of Slurs.[14]

String: Strings are normally indicated by an Arabic number, either enclosed in a circle (most commonly) or in parentheses. On a guitar, the three bass strings, numbered sixth, fifth and fourth, are made of fibers which are wrapped with a fine wire. Silk has been used, but today synthetic fibers are the norm. Because the basses are wound, their surface is not perfectly smooth. The treble strings have been made of gut in the past, but are generally nylon today (See Ex. 1 for string indication in score).

Tablature: A system of notation in which the instrument is graphically represented rather than the pitches. In the examples of tablature used in this thesis, a series of lines represents the courses of the instrument. Numbers or letters are written on or, more commonly, above the lines to show at which frets which courses should be depressed in what combinations and in what succession. In the Italian system, which was also used in Spain, a zero (0) represents an open string, and numbers the frets to be depressed.[15] In the French system, which was also used in England, the letter 'a' is used for the

[14]Original example.

[15]Diana Poulton, A Tutor for the Renaissance Lute, 40.

open strings, and successive letters represent the successive frets.[16] Since each fret of the instruments under discussion is a half step, then if an open string were an E, a minor third G would be obtained at the third fret (three half steps distant). In the French system this would be the letter D, in the Italian system the number 3. All tablature examples will also be shown in modern notation as well to avoid confusion.

[16]Poulton, 4-5.

The Historic Role of the Plucked Strings

The plucked string instruments, such as the vihuela and lute, developed as polyphonic instruments. They were used as solo instruments, as accompanying instruments for songs, and as supporting instruments supplying the harmonic foundation for ensemble music. In each of these roles the plucked strings were normally called upon to sustain bass notes while simultaneously producing melodic material in one or more voices. The need to sustain a bass note (when it is not an open string, or course) limits the melodic activity to the same region or register of the instrument which the bass note occupies. In contrast the normal texture for bowed strings is a single line, resulting in the absence of a need for playing from a fixed position. The following examples, taken both from the solo literature and ensemble literature for plucked strings, illustrate this point.

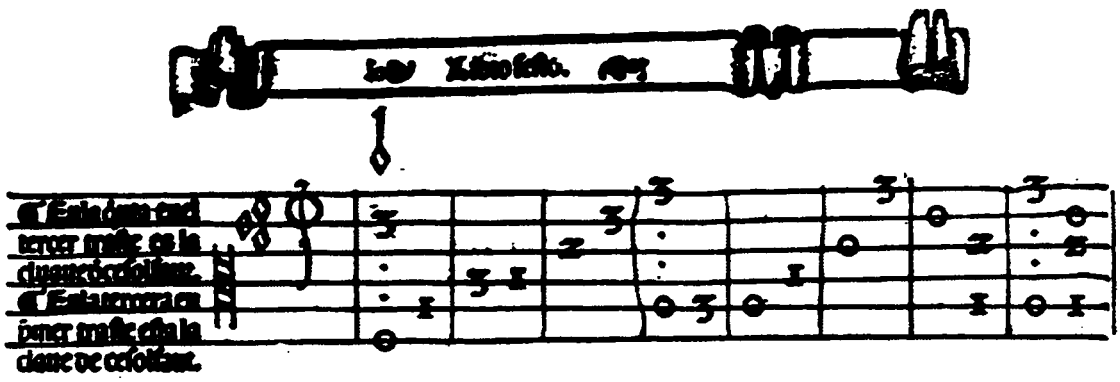
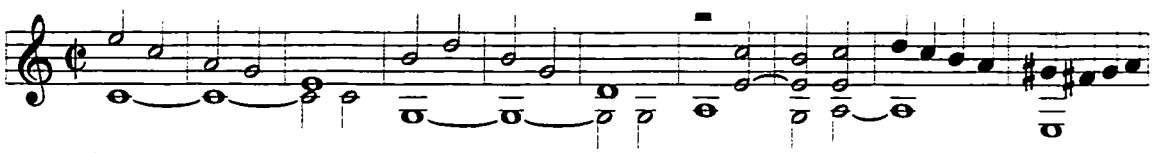


Figure 6 Luys de Narvaez, *Guardame las Vacas* (1538), mm. 1-8, Tablature.[17]



Example 3 Luys de Narvaez, *Guardame las Vacas*, mm. 1-10, Modern Notation.[18]

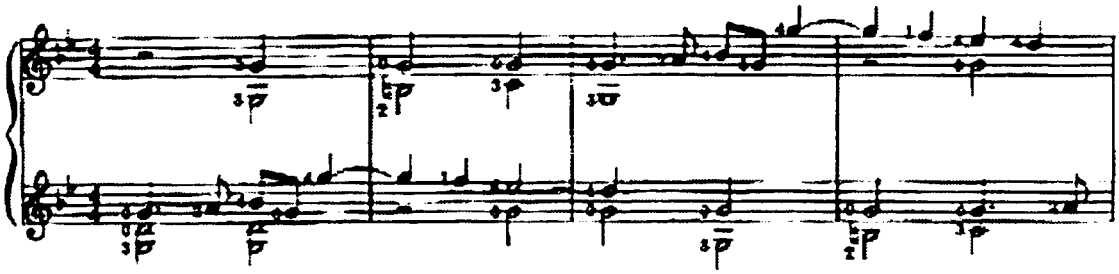


Figure 7 Thomas Ford, *Mr. Southcote's Pavan* (1607), mm. 1-4, Lute Duo, Modern Notation.[19]

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[17]Luys de Narvaez, Los Seis Libros del Delphín de Musica. reprinted in Los Vihuelistas: Luys de Narvaez, from folio LXXXII of facsimile.

[18]Original transcription.

[19]Frederick M. Noad, The Renaissance Guitar, transcribed by Frederick Noad, 116.

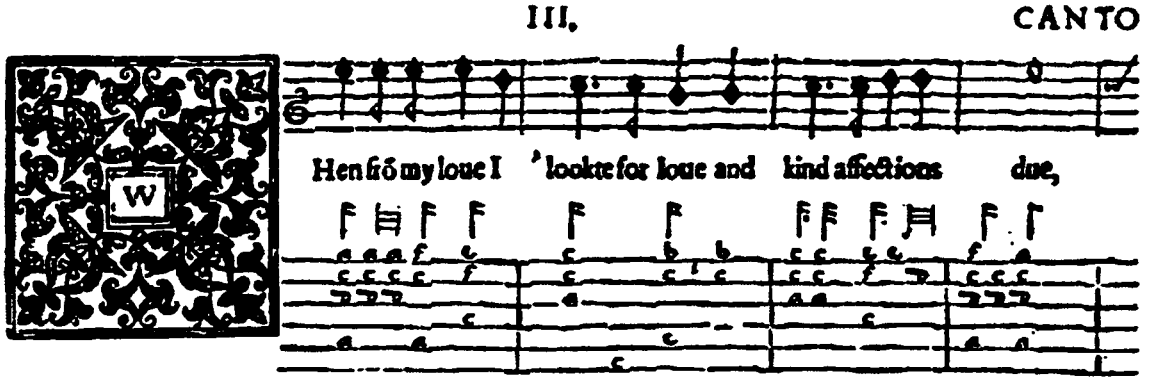


Figure 8 John Bartlet, *When from My Love* (1606), mm. 1-4, Tablature.[20]

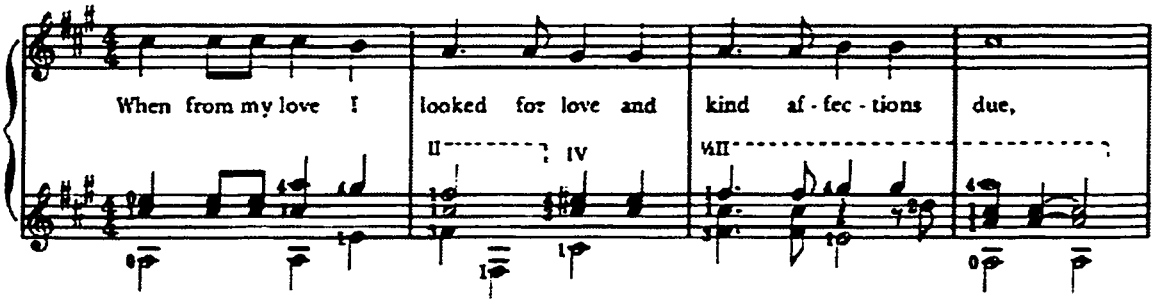


Figure 9 John Bartlet, *When from My Love,* mm. 1-4, Modern Notation.[21]

During the Renaissance and Baroque eras there were no methods in the modern sense for the plucked strings, but there were tablatures. Some of the tablatures were addressed to novices, and others to accomplished players. Examples of these include Luys de Narvaez' Los Seis Libros del Delphin de Musica (1538) from the Renaissance and Passacalles y Obras de Guitarra por todos los Tonos Naturales y Accidentales (1732) by Santiago de Murcia from the Baroque era. The tablatures are normally dedicated to a royal personage

[20]Frederick M. Noad, The Renaissance Guitar, 119.

[21]Frederick M. Noad, The Renaissance Guitar, transcribed by Frederick Noad, 118.

and would have been addressed to an educated elite. The tablatures are valuable in terms of graphically showing where the music was played on the instrument.

The tablatures for novices seem to assume a certain level of musical education and begin by explaining the tablature system rather than introducing basics of rhythm or dealing with other fundamentals (with the possible exception of tuning the instrument). Following this explanation they move immediately to pieces of music. In most cases the first pieces are relatively simple, and gradually become more advanced. However, even the beginning pieces in these tablatures are of a technical level that would be placed toward the end of a beginning level method today. Following is the explanatory material from Luys de Narvaez' Los Seis Libros del Delphín de Musica.

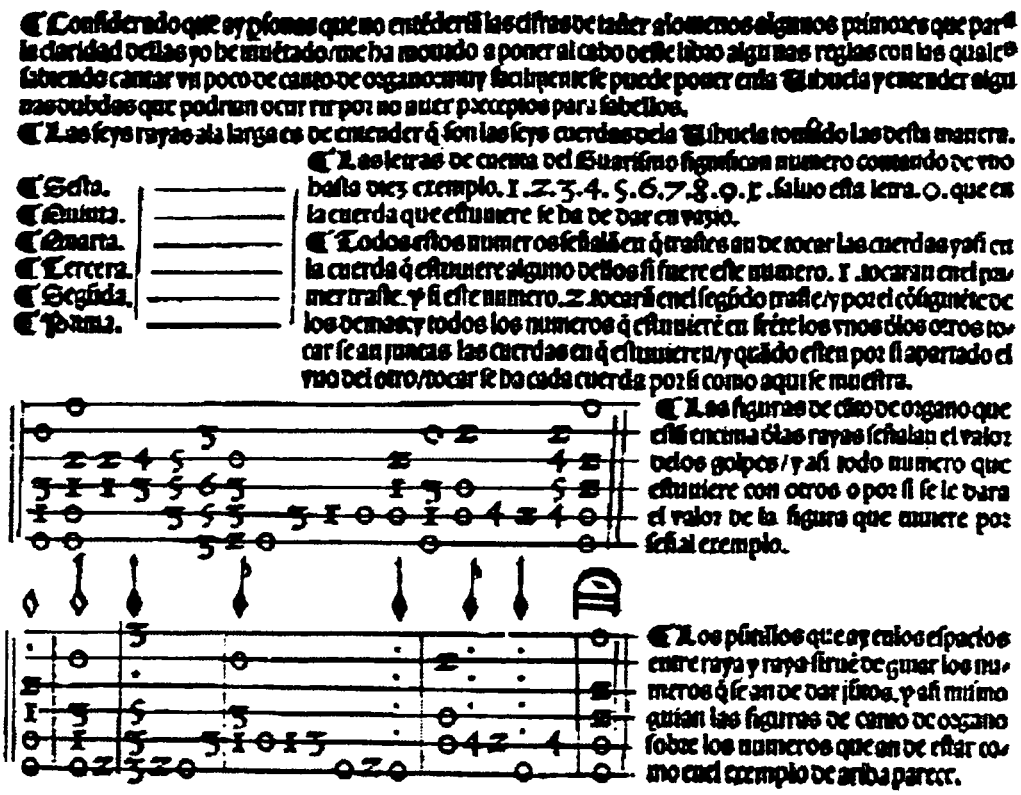
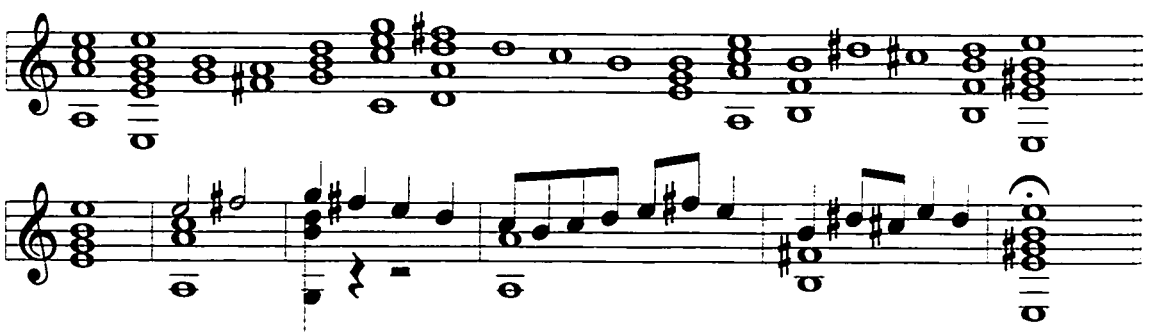


Figure 10 Luys de Narvaez, Explanation of Tablature (1538), Facsimile.[22]



Example 4 Luys de Narvaez, Explanation of Tablature, Modern Notation.[23]

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[22]Luys de Narvaez, from prologue of facsimile.

[23]Original transcription.

Luys de Narvaez begins this explanatory material with directions on how to tune (by tightening the highest pitched string just shy of breaking, and then tuning the rest relative to that one), the correlation between lines on the tablature and strings of the vihuela, and examples of music which, as can be seen in Ex. 4, are harmonically based.[24] These passages are typical of the textures used by the composers for the lute and vihuela. This would indicate that playing around a chordal foundation was considered the foundation of technique.

Further evidence for the role of the plucked string can be seen in its use as a basso continuo instrument. Santiago de Murcia gave directions for the use of the Baroque guitar to realize the harmony of a figured bass in his Resumen de Acompañar la Parte Con la Guitarra of 1714.

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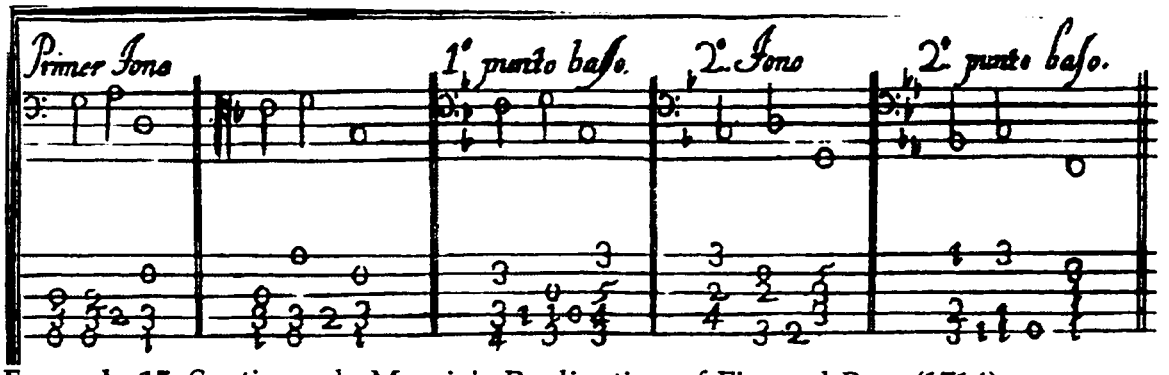
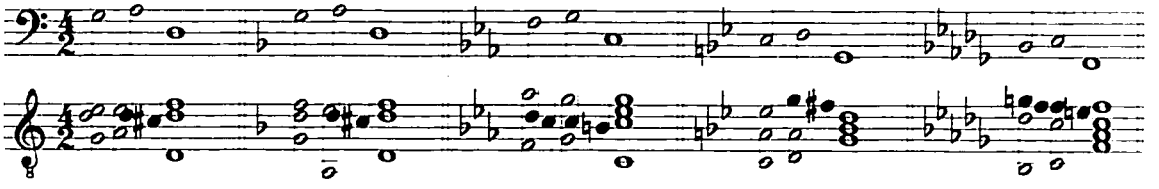
[24]Luys de Narvaez, from prologue of facsimile.



Example 15 Santiago de Murcia's Realization of Figured Bass (1714), Tablature.[25]



Example 5 Santiago de Murcia's Realization of Figured Bass, Modern Notation.[26]

The role of the lute as a basso continuo instrument is also well documented. "...the continuous notated bass line was played on a bass instrument capable of sustaining tones (e.g., violincello, viola da gamba, bassoon), and the harmonies were improvised on an instrument capable of producing chords (e.g., Keyboard, lute)."[27]

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[25]Santiago de Murcia, Resumen de Acompañar la Parte Con la Guitarra, 10.

[26]Original Transcription.

[27]Stolba, K. Marie, The Development of Western Music-A History Second Edition, 286.

The basic conception of the plucked strings thus developed around a relatively fixed hand position due to their harmonic role, while that of the bowed strings developed around an increasing preference for a mobile position. This conception is a factor in the development of technical literature for the instruments.

Chapter Two
The Classical Methods

The early methods for guitar are generally organized around a progressive movement through the different positions of the instrument, and with the idea that changes of position should be avoided if possible. The practice of shifting technique in scales is addressed, but not developed thoroughly. The ability to move freely through the full range of the instrument in the twelve key signatures (not counting enharmonic equivalents) which are used for the major and their relative minor keys was also not developed.

The major guitarists of the classical era were known both as virtuoso performers and as composers and teachers. These guitarists each wrote methods for the guitar as well as music, much of which was directed at beginning players. These methods have in common a position approach to learning the instrument: notes are first learned in the first position of the instrument, and later successive positions are explored. Movements between positions are avoided if possible. With regard to developing scale technique, only Dionisio Aguado and Fernando Sor addressed single string scale technique at all. No artist of this period (or any found in the course of this research), has provided a thorough treatment of shifting through the different positions. I will give a brief overview of the methods of Ferdinando Carulli, Matteo Carcassi, Mauro Giuliani, Fernando Sor, and Dionisio

Aguado. I will focus on scale technique in their methods, as well giving their biographical information.

Ferdinando Carulli

Ferdinando Carulli (1770 - 1841) was an Italian guitarist, composer, and teacher. Carulli originally studied the cello and later in his youth taught himself the six string guitar (at that time a six string guitar was relatively new). He settled in Paris in 1808 and soon became the city's most prominent guitarist. Carulli is most known today for his Méthode Complete pour Parvenir a Pincer de la Guitare, which he published in Paris in 1825 and dedicated to his son Gustavo.[28] Carulli's method, with minor modifications, has remained in print from then till the present.

Carulli's method begins with a rather hasty introduction to the elements of notation including rhythm and tempo markings and the names of pitches on the staff and the varieties of clefs. He also treats conventions of notation specific to the guitar. Following this introduction, he begins by presenting the scale in the first position of the guitar indicating strings and fingering.

He continues with more preliminary exercises for both the left and right hands followed by the method proper. This method begins in the first

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[28]Thomas F. Heck, "Carulli, Ferdinando." The New Grove Dictionary, Vol. 3, 839.

position with a scale and a series of chords presenting the basic material in the key of C followed by three short pieces in the key of C.

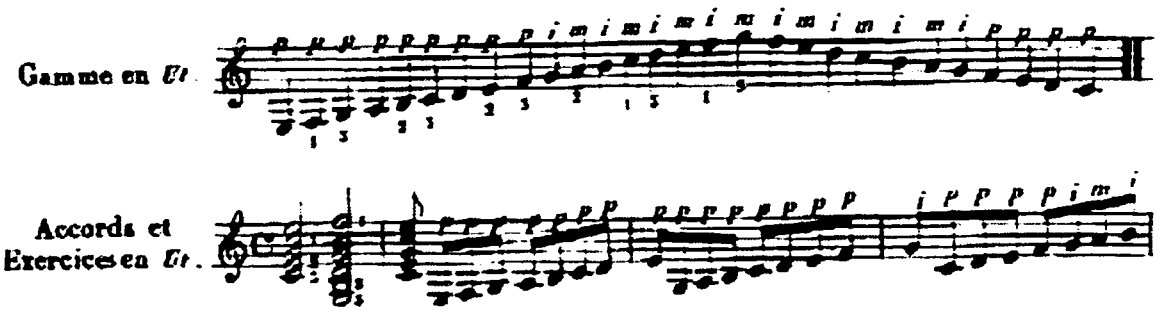

Figure 12 Lesson in C Major from the Carulli Method.[29]

Carulli continues with this format, first going through major keys and then minor keys in the first position. He concludes the first section with a suite of pieces in the first position. The right hand fingerings used in Fig. 12 are typical of this period. The thumb is preferred for the three bass strings, and the fingers for the three treble strings. The ring finger is avoided. These principles were discarded by the Tárrega school (which will be discussed later) just as the avoidance of the thumb was discarded in keyboard technique.

The second section begins with more advanced techniques and the concept of different positions on the instrument. He then presents scales which are confined to those positions, each of which is followed by an exercise alternating chords and scales in that position.

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[29]Ferdinando Carulli, Méthode Complete pour parvenir a pincer de la Guitare, 18.

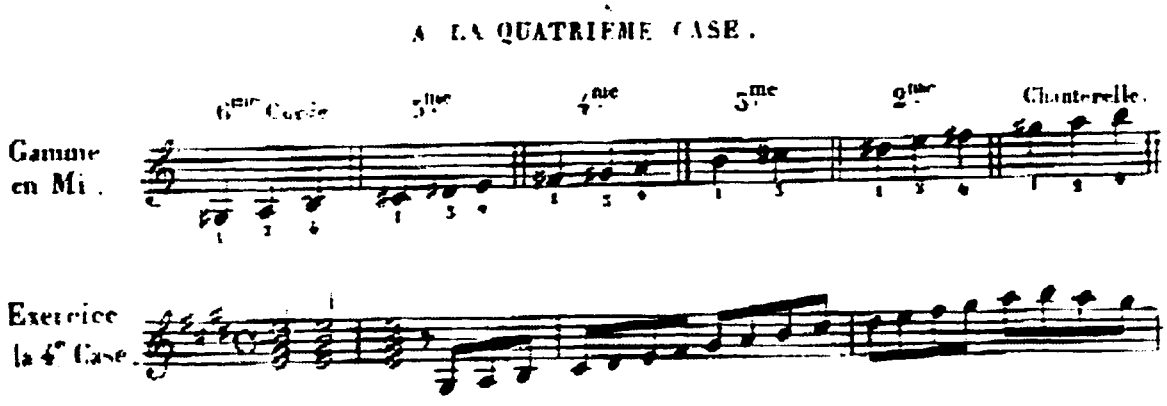

Figure 13 Scale in Fourth Position from the Carulli Method.[30]

Although he presents pieces that involve moving through different positions, he does not develop that technique for those pieces.

Matteo Carcassi

Matteo Carcassi (1792 - 1853) was an Italian guitarist who settled in Paris in 1820.[31] He was a rival of Carulli's until 1823 when Fernando Sor arrived on the scene and eclipsed them both.[32] Carcassi gave tours, including a successful tour in Germany and an appearance in London in 1824. Despite the opposition of Fernando Sor, Carcassi considered Paris to be his home base until his death in Paris in 1853.[33]

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[30]Carulli, Méthode, 53.

[31]Matteo Carcassi, Matteo Carcassi: Selected Works for the Guitar, ed. Frederick Noad, from editor's foreword.

[32]Heck, "Carulli, Ferdinando." The New Grove Dictionary, Vol. 3, 839.

[33]Carcassi, Matteo Carcassi, ed. Frederick Noad, from editor's foreword.

Carcassi is most known today for his Methode Complete pour la Guitare opus 59 and Studies opus 60. His method follows Carulli's format very closely. It begins with a slightly fuller description of the elements of music including a section on key signatures and the forms of the major and minor scales. He continues with the same kinds of preparatory materials as in Carulli's method. The main body of the method has the same kinds of materials and the same basic divisions between sections. The first section is restricted to the first position.

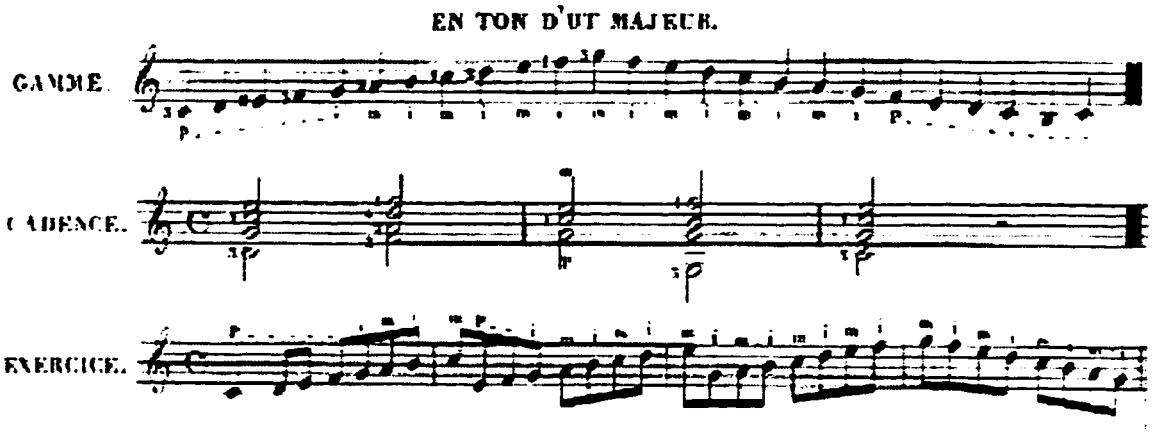

Figure 14 Lesson in C Major from the Carcassi Method.[34]

The second section begins with an explanation of the same techniques as Carulli's method, slightly expanded to include ornamentation and muting (using the fingers to stop strings vibrating in order to play rests) and then an explanation of the different positions with scales and brief exercises in the fourth, fifth, seventh and ninth positions. This is likewise followed by scales

[34]Matteo Carcassi, Méthode Complete pour la Guitare op. 59, 18.

and double notes. A difference at this point is that Carcassi introduces more remote keys, and music with some movement between the first and higher positions. Following this he introduces harmonics and then concludes with a series of pieces. The scales that Carcassi presents in this section do move between different positions but this is not addressed in detail.

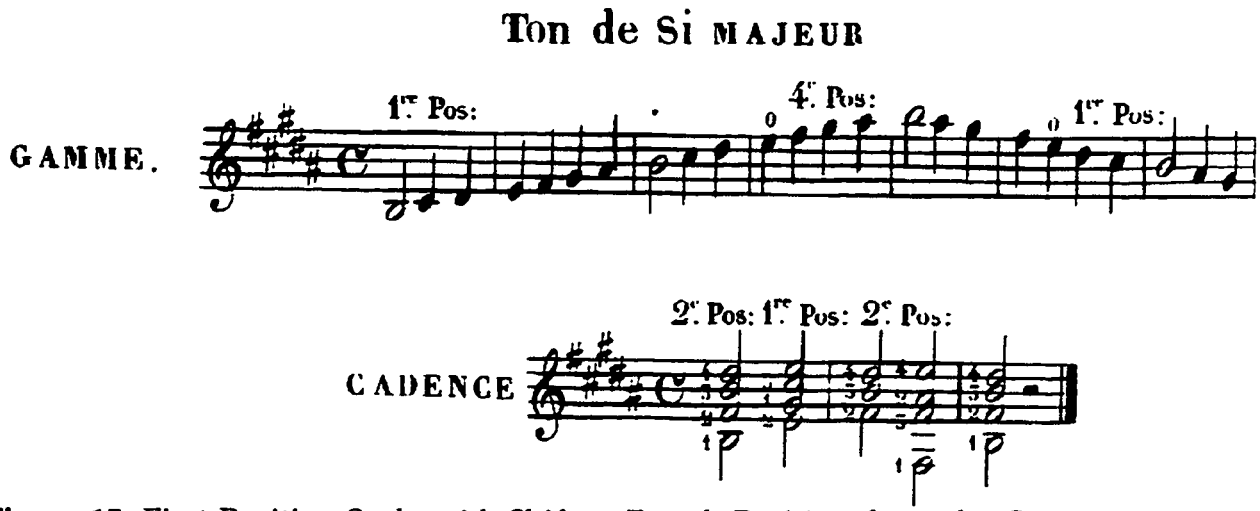

Figure 15 First Position Scale with Shift to Fourth Position from the Carcassi Method.[35]

[35]Carcassi, Méthode, 59.

Mauro Giuliani

Mauro Giuliani (1781 - 1829) was born in Italy where he studied cello and counterpoint and the six string guitar. The guitar became his principle instrument early in life, but the musical scene in Italy was dominated by Opera, so he moved to Vienna in 1806. In Vienna, Giuliani quickly became famous as the "greatest living guitarist and also as a notable composer."[36] He continued to play the cello (he did so for the premiere of Beethoven's seventh symphony), but the guitar remained his livelihood. He gave frequent performances as well as teaching and composing for the guitar.[37]

Giuliani's Studio per la Chitarra, opus 1 is divided into three sections. The first section begins with an explanation of the signs for fingering and the layout of the method. He assumes a knowledge both of notation and the layout of the guitar, since he does not address these issues at all. The studies of the first section consist of 120 variants of right hand fingering in the same cadential pattern

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[36]Heck, "Giuliani, Mauro (Giuseppe Sergio Pantaleo)." The New Grove Dictionary, Vol. 7, 413-14.

[37]Ibid.

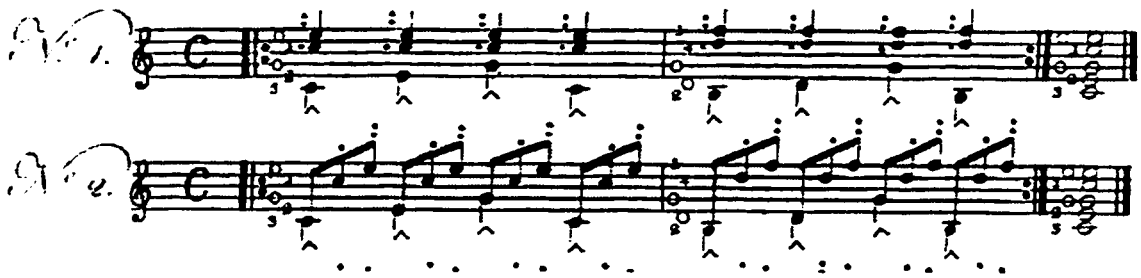

Figure 16 Right Hand Exercises 1 and 2 from the Giuliani Method.[38]

The second part deals with passages in thirds, sixths, octaves, and tenths in the keys most commonly used on the guitar. The third part demonstrates the polyphonic capabilities of the guitar as well as ornamentation and slurs and other advanced techniques. The fourth part is a series of twelve studies. Nowhere is scale technique addressed.[39]

Fernando Sor

Fernando Sor (1778 - 1839) was born in Spain and was educated at a monastery choir school in Montserrat and at the military academy in Barcelona. He was a capable composer, who wrote operas, ballets, symphonies, and string quartets as well as works for guitar and piano. His opera *Telemaco* was produced at the Barcelona Opera House in 1797 and four of his ballets were produced in London between 1821 and 1823. The most famous of these, *Cendrillon*, was danced at the Paris Opera over 100 times and

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[38]Mauro Giuliani, Studio per la Chitarra, opus 1, 1.

[39]Giuliani, Studio.

chosen for the grand opening for the Bol'shoy Theater in 1823.[40] Fernando Sor is the most skilled of the composers for the guitar in this period, the only one to extensively compose for other instruments. His guitar works have more intricate harmony and counterpoint than was used by his contemporaries.

His Sor's Method for the Spanish Guitar, gives the most extensive theoretical description of guitar technique and principles of fingering of any of the classic era methods. It "...has been called, 'easily the most remarkable book on guitar technique ever written.' "[41] Fernando Sor begins with an introduction in which he describes his own path of discovery on the guitar. Next come considerations for purchasing an instrument of quality, followed by discussion of the position of the instrument and the use and position of the hands on the guitar. He then moves to a discussion of tone production and tone colors, and of knowledge of the fingerboard. Sor uses single string scales for this purpose but not for developing scale technique. He recommends playing slowly and with an awareness of the pitches being played from the open string to the next octave on that string. This is accomplished on each string as follows: the open string's first note is considered first as tonic, then supertonic, then mediant, and so on until the first note has been treated as each scale degree of a major scale. He gives principles of fingering for this as well. Sor's purpose is not to develop

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[40]Brian Jeffery, "Giuliani, Mauro (Giuseppe Sergio Pantaleo)." The New Grove Dictionary, Vol. 17, 533-4.

[41]Jeffery, "Giuliani, Mauro (Giuseppe Sergio Pantaleo)." The New Grove Dictionary, Vol. 17, 533-4. Jeffery is quoting from Grunfeld, 182.

awareness of the Ecclesiastic modes (Such as Dorian), or to develop shifting technique. Rather, the goal of this practice is knowledge of where the pitches are on each string.

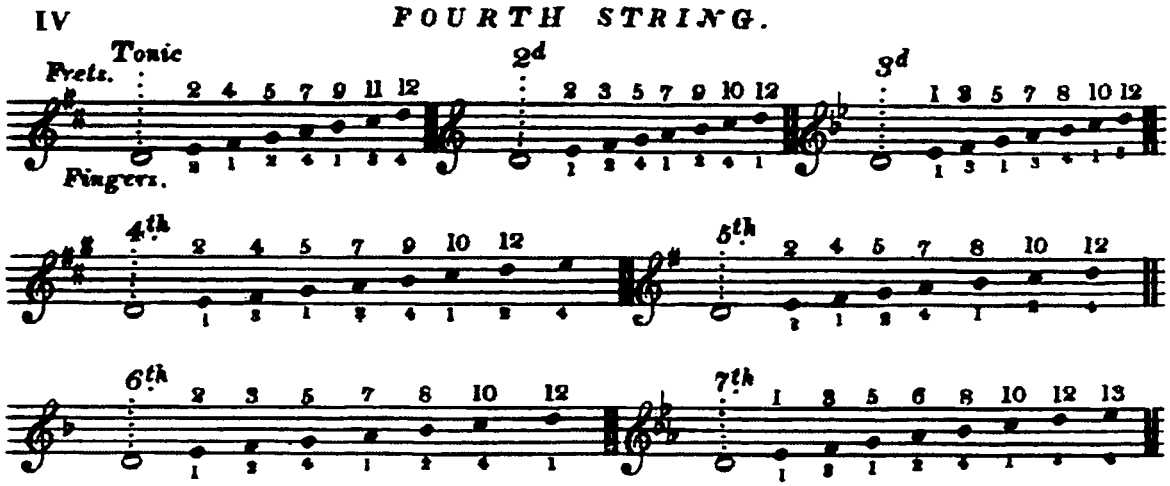

Figure 17 Exercise in Locating Pitches of the Fourth String from the Sor Method.[42]

Although Sor does not give exercises to develop shifting as part of scale technique, he does give examples of slur technique which involve shifting mostly on the first string.

[42]Fernando Sor, Sor's Method for the Spanish Guitar, IV.

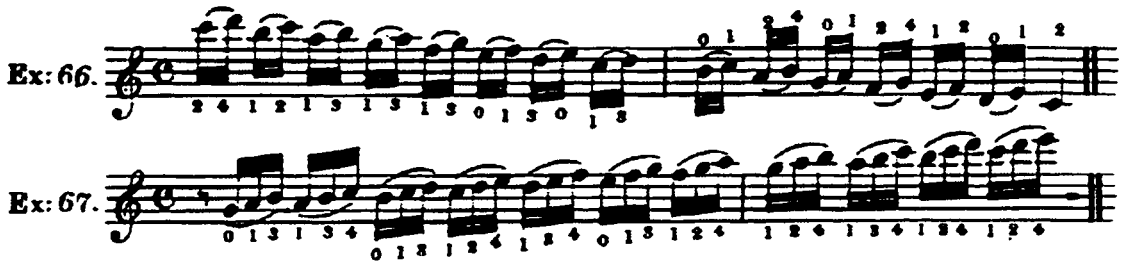

Figure 18 Ascending Slurs from the Sor Method.[43]

The lack of shifting is a result of two things: firstly, that shifting be avoided as much as possible; and secondly, that the fingers remain in contact with the strings as much as possible. The avoidance of shifting is the third item in a series of twelve summarizing points given at the end of his method: "To be sparing of the operations called barring and shifting."[44] Sor states elsewhere, "...I almost always make the fingering which I employ for melody depend on that which I use for harmony."[45]

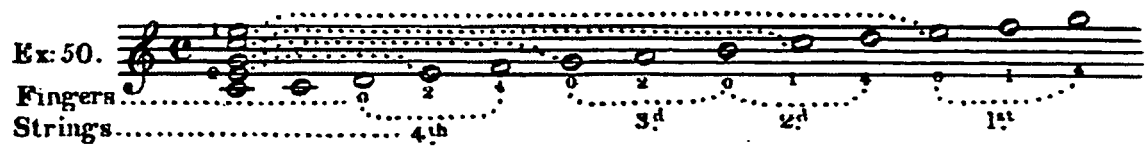

Figure 19 Illustration of the Accessibility of Pitches from Chord Position from the Sor Method.[46]

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[43]Sor, Sor's Method for the Spanish Guitar, XX.

[44]Ibid., 48

[45]Ibid., 28

[46]Ibid., XVII.

Sor considers this to be the ideal for fingering, so as to retain harmony and melody. He feels the execution of rapid passage work to be the province of the violin, and therefore attempt to develop strong scale technique.[47]

Dionisio Aguado

Dionisio Aguado (1784 - 1849) was born in Spain and spent the first part of his career there. Due to Napoleon's invasion of Spain, Aguado retreated to Fuenlabrada in 1803 and remained there until 1824. Although he taught and continued to develop his technique during this time, he was delayed in achieving wider recognition because of the war. He moved to Paris in 1825 and was immediately acclaimed a virtuoso and great teacher. Aguado arrived in Paris while Fernando Sor was in Russia, but when Sor returned, they developed a close collaboration and often performed together. Aguado left Paris in 1838 and spent his last ten years in Madrid mainly teaching.[48]

Aguado's method, Nuevo Método para Guitarra, is divided into four sections. The first section gives general information on the guitar, its nature, how to select a good instrument, and so on. An important point which Aguado makes in this section is that each string has a different tone quality due to differences in thickness and material. Although he does not exploit this difference in his approach to fingering, it becomes an important musical consideration for future guitarists.

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[47]Sor, Sor's Method, 21.

[48]Heck, "Aguado (y Garcia), Dionysio." The New Grove Dictionary, Vol. 1, 168

The second section is the beginning of the method proper. Its first chapter begins with an explanation of how to use the hands, followed by a chromatic scale (which is used to show the placement of pitches in the first position of the guitar and along the length of the first string) and a natural diatonic scale. The diatonic scale is shown only in the first position and with fingering, so this is intended to be played. He moves quickly to playing in a single line (one example), playing in parallel thirds (one example plus a short piece combining thirds with single line), and parallel octaves before jumping into chords. Each example is preceded by a copious explanation of how it should be physically played. Aguado assumes a musical background since he incorporates rhythms of increasing complexity very early without explaining rhythm or giving a student practice in developing rhythmic skills.

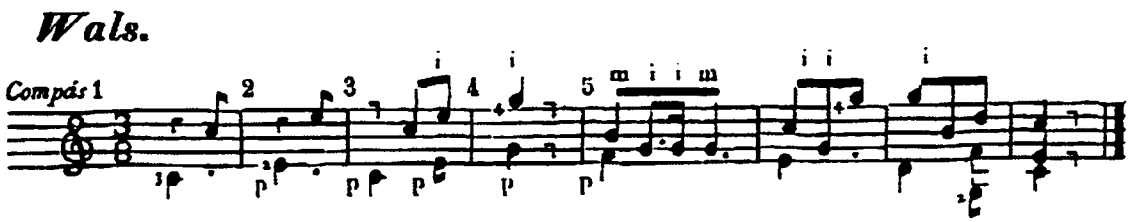

Figure 20 Dionisio Aguado, *Walz*, mm. 1-8, from His Method.[49]

The method continues with short pieces of music in homophonic texture, quickly moving to pieces that involve the ninth position and equivalent pitches on different strings. Slurs and ornaments are explained and included in succeeding pieces.

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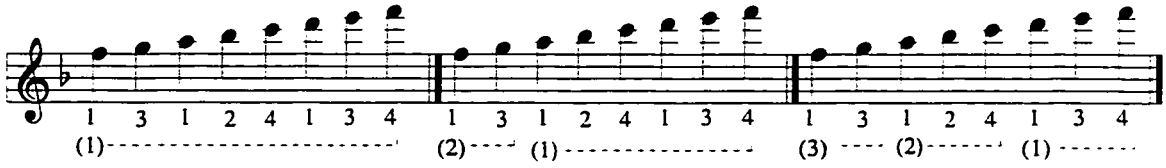
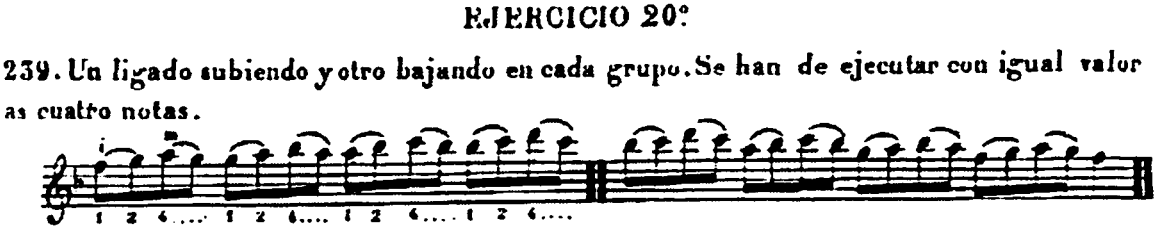
[49]Dionisio Aguado, Nuevo Método para Guitarra, 19.

The second chapter is a series of exercises for the left hand. While the first chapter mainly comprises pieces of music, the second chapter is devoted to exercises. Aguado begins this section with the major scale in one octave on the first string, divided between the first and second strings, and using the third through first strings.



Example 6 Three Scale Fingerings from Aguado's Method.[50]

He then presents a series of exercises in which the focus is performing slurs of increasing complexity through the range of a single string. The exercises are only given in major, and although there is some development of shifting technique, the focus is on slurs.


EJERCICIO 20º

239. Un ligado subiendo y otro bajando en cada grupo. Se han de ejecutar con igual valor as cuatro notas.

Figure 21 Single String Slur Exercise from Aguado's Method.[51]

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[50]Aguado, Nuevo Método, 83. I have re-engraved this example with Aguado's editing.

[51]Aguado, Nuevo Método, 99.

. The same element is then practiced on adjacent strings. The next scale focus is single position playing in the upper register. This section is concluded with a series of cadential patterns, increasingly elaborated with passage work to produce cadenzas. Aguado's goal in this material is mechanical. He neither presents these materials in a variety of keys, nor presents shifts which exceed the interval of a fourth in his material involving scales. In fact, most of the shifting is by the interval of a second.

The third section of the method is a series of studies, while the fourth deals with the definition of musical terms such as *Largo,* and concepts of flexibility of tempo (*ritardando, rubato,* etc.). The fifth section is a series of chapters dealing with music theory which is demonstrated as relevant to the guitar.

Consideration of Timbre During the Classical Era

On stringed instruments, like the violin or guitar, variations in timbre, or tone color, can be achieved by playing closer to or further from the bridge, by playing with a different variety of attack, or by playing on a different string. The strings of the violin are of varying thickness. This difference causes the same pitch played on different strings to be colored by different overtones. Joseph Szigeti's approach to tone color on the violin as described by Arnold Steinhardt (of the Guarneri Quartet) is an example of this principle: "He would go to great lengths to differentiate colors; he spoke of 'étages' –steps or levels– and would say, 'this phrase is for soprano; keep it on one string. The next is for alto; play it on another string.' "[52] Each string of the guitar is also of a different size and produces a different timbre. Aguado is the only guitarist of this group who mentions the characteristic sound of each string as a consideration,[53] but he does not appear to exploit it in editing his own music. In practice he seems to follow the other classical era guitarists in playing a note where it is most readily found rather than trying to resolve a dissonance on the same string on which it is created. In the following passages, although it would be technically a simple matter to do so, the leading tone figures and their resolutions are on two different strings.

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[52]David Blum, The Art of Quartet Playing, 144.

[53]Aguado, Nuevo Método, 20.

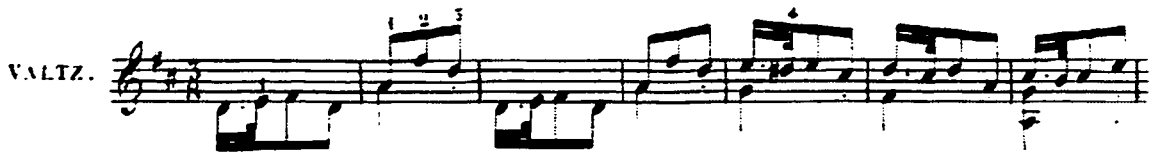

Figure 22 Dionisio Aguado, *Waltz op. 7*, mm. 1-7, .[54]

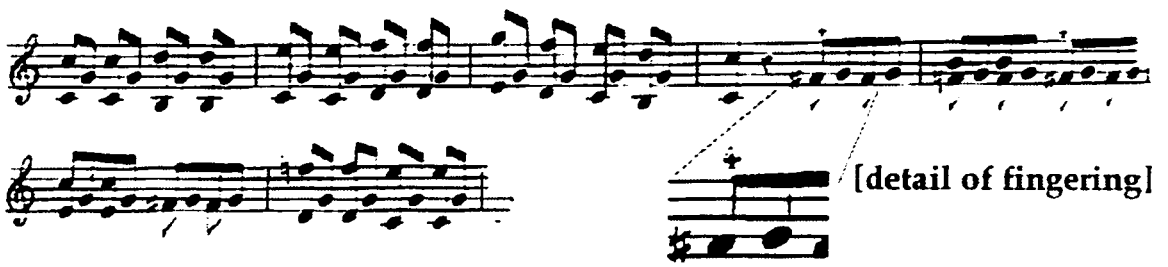

Figure 23 Ferdinando Carulli, *Andante*, mm. 31-36, from his method.[55]

Figure 24 Fernando Sor, *Exercise #22 Allegretto*, mm. 24-27.[56]

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[54]Aguado, Fifteen Works with Opus Numbers, 83.

[55]Carulli, Méthode, 31.

[56]Sor, Fernando Sor: Complete Works for the Guitar, Facsimile Edition, 84.

Chapter Three
The Modern Guitar Schools

Francisco Tárrega: The Beginning of the Modern School of Guitar

Francisco Tárrega, (1852-1909), a Spanish guitarist and composer, created the most widely used school of technique of the twentieth century. Tárrega began studying the guitar in 1862 with Julian Arcas, but his father insisted that he study the piano as well since the guitar was not very popular at that time. He continued his study of both instruments, becoming accomplished on both. In 1874 Tárrega entered the Madrid Conservatory where he studied theory, harmony, and piano. He earned his living as a music teacher and concert artist, and was called "the Sarasate of the Guitar."[57] Tárrega was a friend of both Albéniz and Granados and was the first to transcribe their works for the guitar. He also transcribed works of Chopin (several preludes), Mendelssohn, Gottschalk, and Beethoven (the Adagio and Allegretto from the Sonata op. 7, the "Moonlight Sonata"). His transcriptions actually outnumber his own works for guitar. He wrote around seventy pieces for the guitar as compared to one hundred and twenty transcriptions for solo guitar, and twenty-one for guitar duet.[58] His transcriptions

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[57]Heck, "Tárrega, (y Eixea), Francisco." The New Grove Dictionary of Music, Vol. 18, 583. Sarasate was a renowned violinist and contemporary with Tárrega.

[58]Ibid.

demonstrated the capacity of the guitar to play music which was widely recognized as serious. Most people at the time thought the guitar was not suitable for the concert stage, "...was destined only for the rendering 'of some Serenade of Love under a starry sky.' "[59] The following passages give evidence of the guitar's technical and aesthetic as a concert instrument.

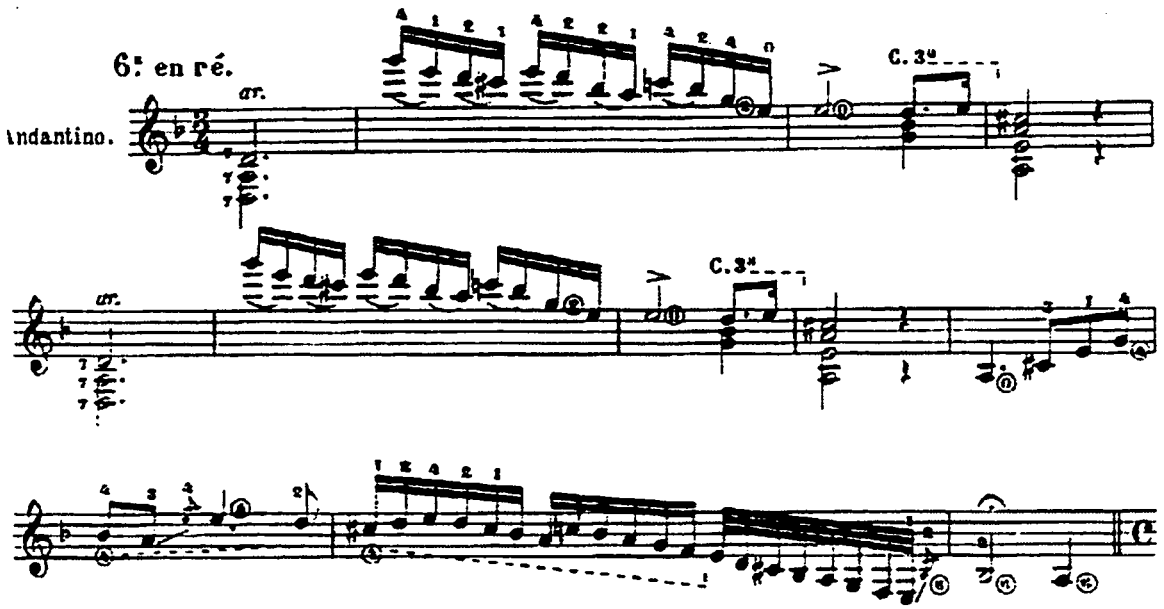

Figure 25 Francisco Tárrega, *Capricho Arabe*, mm. 1-12.[60]

[59]Miguel Llobet, Miguel Llobet: Guitar Works Volume 1, 11 Original Compositions, xi. Quoted in foreword from Paris newspaper of 1912.

[60]Francisco Tárrega, Francisco Tárrega: The Collected Guitar Works, 9.

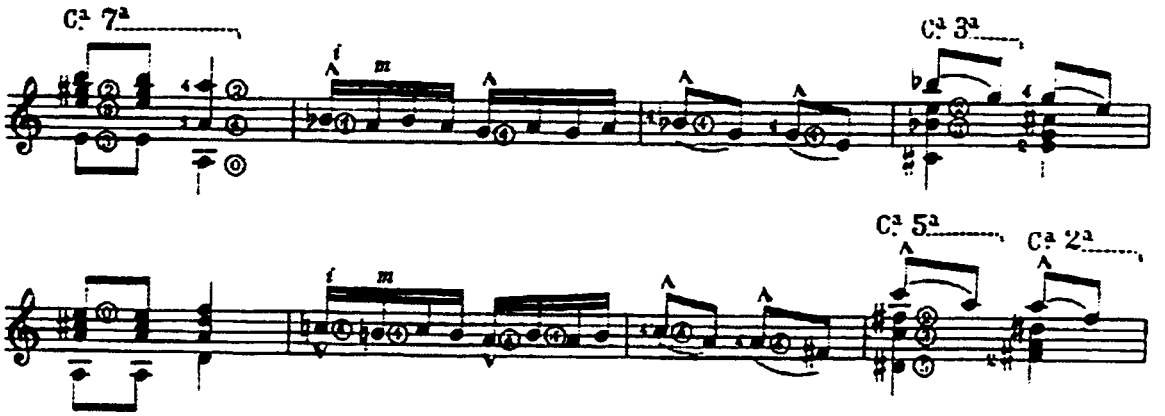

Figure 26 Robert Schumman, *Saint-Nicolas*, arranged by Tárrega, mm. 8-15.[61]

These passages, one from an original composition, the other from a transcription, exploit the timbre of specific strings and use the extreme range of those strings. The passages are fingered not for ease of performance, but to achieve specific colors.

Tárrega exploits the timbre of strings to a much higher degree than his predecessors, a consideration which becomes very important for the guitarists following him.[62] He changed both the technique of the guitar, and the conception of making music through the guitar. Tárrega's technique, directly or indirectly, has been transmitted to most classical guitarists of the twentieth century. The major teachers of the earlier part of the twentieth century were all Tárrega's students. The most important of these from a pedagogical standpoint was Emilio Pujol, who wrote a guitar method in which he attempted to pass on Tárrega's technique. The major classical guitarists of the twentieth century have almost entirely been schooled in the Tárrega

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[61]Tárrega, Francisco Tárrega, 121

[62]Llobet, Miguel Llobet, ed. Ronald Purcell, iv. From editor's foreword.

tradition. The only recognized major innovation in technique following Tárrega is the work of Abel Carlevaro, who will be discussed later.

Technical Literature in the 20th Century

The majority of the technical literature of this century reflects the influence of the Tárrega school. Andrés Segovia played an important role in this as an advocate of the Tárrega school and as the single most influential guitarist of this century, "The standard by which all guitar technique is evaluated."[63] The major teachers of this century include: Miguel Llobet, Emilio Pujol, Andrés Segovia, Julio Sagreras, Frederick Noad, Aaron Shearer, and Abel Carlevaro. Of this group, Abel Carlevaro is the only major innovator in the technique of the guitar. In this section I will discuss the major teaching methods and literature of this century, including biographical information where available.[64]

Miguel Llobet

Miguel Llobet (1878 - 1938) was born in Spain and studied the graphic arts under his father, a famous wood sculptor. When Llobet was eleven, his uncle bought a guitar for the household and Llobet began studying the guitar that year. At fourteen Llobet's teacher introduced Llobet to Tárrega who took

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[63]Guitar Master Class: Technical Exercises by Famous Guitarists and Teachers, ed. Ronald J. Sherrod, 6. From editorial commentary.

[64]After consulting the World Wide Web, the International Who's Who in Music and Musicians Directory International Who's Who in Music and Musicians Directory, 12th ed., Who's Who in American Music, and B. Hodel, "Abel Carlevaro: Master Teacher, an Interview." Guitar Review, 9-11, I was unable to obtain birthdates for either Frederick Noad or Abel Carlevaro.

him on as a student. Llobet became one of Tárrega's favorite pupils and developed into an acclaimed virtuoso who was compared with Paderewski in his artistry. "One of the major musical attributes Llobet received in his training from his teacher, Tárrega, was the concept of exploring and experimenting with sound and colour."[65] Llobet continued developing Tárrega's principles of the guitar both technically and musically. "...Llobet, attracted by the diverse timbres of the orchestra, attempted to make each string a distinct guitar (colour)."[66] Miguel Llobet is known today mainly for his compositions and transcriptions for the guitar. Although Llobet did not publish a method himself, he passed on Tárrega's legacy through teaching and through his editing of guitar music. His edition of Carcassi's Studies Opus 60, shows a great concern for developing the weaker fingers of the hands. In the following example, the repeated notes are fingered with the ring and middle fingers of the right hand, the weakest combination available.

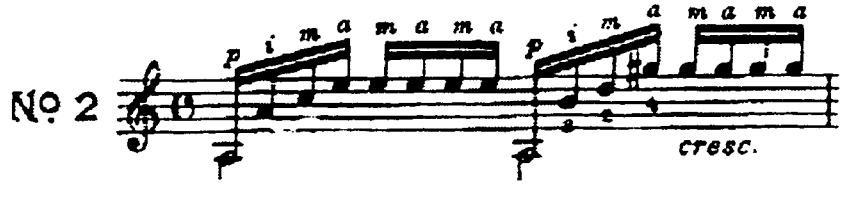

Figure 27 Matteo Carcassi, *Study #2, op. 60*, ed. Llobet, ms. 1.[67]

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[65]Llobet, Miguel Llobet, ed. Ronald Purcell, iv. From editor's foreword.

[66]Ibid.

[67]Carcassi, 25 Estudios op. 60, 5.

Emilio Pujol

Emilio Pujol, (1886-1980), was a Spanish guitarist and composer, and the most prominent of Tárrega's pupils. He entered the Municipal school of music in Barcelona at age nine and was giving concerts on the bandurria(a relative of the guitar) in Paris before he was twelve. Pujol began studying the guitar in 1900 and studied with Tárrega from 1902 to 1909. His concert career began in 1912 with performances in Madrid and London and later tours of South America and Europe, which established his international reputation. Besides developing as a virtuoso, Pujol extensively studied tablatures for the vihuela and gave numerous lecture recitals on his findings. Later he concentrated on teaching and was appointed professor of vihuela at the Barcelona Conservatory in 194. From 1946 to 1969, he gave courses in the vihuela and guitar at the Lisbon Conservatory. Pujol's most important contributions are his musicological research and editions of vihuela music and his method, the Escuela Razonada de la Guitarra.[68] In terms of presentation, Pujol's method is modeled after that of Aguado, with extensive explanation preceding each example.[69]

Pujol's method is in five parts and an extensive introduction which are arranged in four volumes. The first volume, containing the first and second chapters, is an extensive preliminary covering the parts of the guitar, including details of construction, design of guitar strings, precise thickness of

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[68]José López Calo, "Pujol, Emilio." The New Grove Dictionary, Vol. 15, 450-51.

[69]Emilio Pujol, Guitar School: A Theoretical-Practical Method, ed. Matanya Ophee, xvii. From editor's preface.

each string, tunings both of the modern guitar and guitar ancestors (such as the lute, vihuela, and Baroque guitar), range of the modern guitar, layout of the fingerboard, development of notation for plucked strings from vihuela tablatures to modern notation, as well as principles of fingering, aspects of sound relative to thickness of strings and variations of attack, playing position, use of the hands and of the fingers of each hand, methodology for study, listing of signs, and music abbreviations and terminologies of the guitar from the Renaissance to the present.

The second volume is the beginning of actual instruction on the guitar. It contains the first two parts of the practical method. The first part of volume two is designed to introduce the basic techniques and the pitches on the first position of the guitar. It begins with instructions for tuning followed by exercises for plucking with the fingers and thumb first without, and then with, rhythm. He moves on to basics of left hand use beginning with instructions for placing the fingers in chords, which are played with his previous techniques. Pujol, like his Renaissance predecessors, treats chords as a more basic technique than scales.

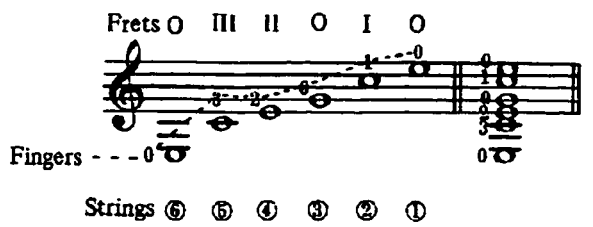

Figure 28 First use of Left Hand in the Pujol Method.[70]

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[70]Pujol, Guitar School, 85.

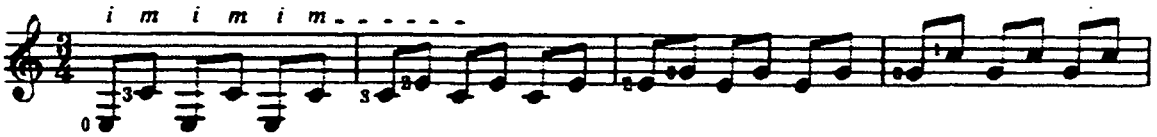

Figure 29 Mm. 1-4 of Right Hand Exercise from the Pujol Method.[71]

These kinds of materials continue, gradually adding changes of chords before finally preparing for scales, which are given in each major and minor key and are intended for the first position. These scales are very similar to the first position scales in the Carulli method (see Fig. 12).

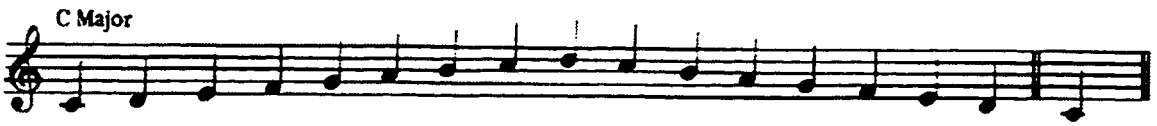

Figure 31 C Major Scale in First Position from the Pujol Method.[72]

The second part of volume two begins with considerations for moving from one position to another. He then presents fingerings for major and minor scales in a single position which should be transposed to each of the first nine positions on the guitar. These scale fingerings are similar to those in the second part of the Carulli method (see Fig. 13).

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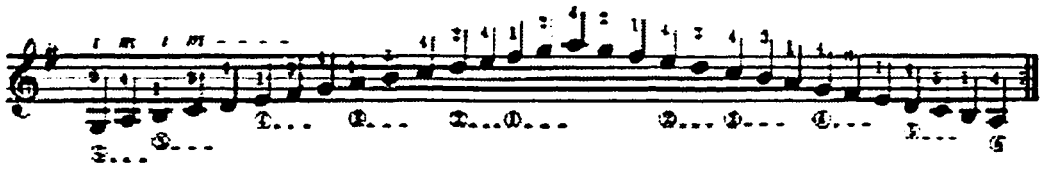
[71]Pujol, Guitar School, 91.

[72]Ibid., 115.

Diatonic major scale.



Diatonic minor scale.

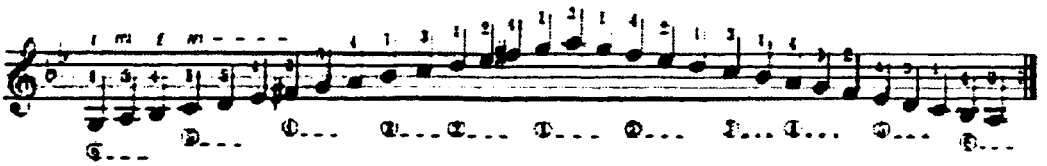


Figure 31 Pujol's Single Position Major and Minor Scale Fingerings.[73]

He then treats playing in two voices at a time as applied to changes of harmony and playing on different intervals. The remainder of part two is largely given to different right hand patterns played on bar chords or chord progressions, and slur technique and harmonics. Lastly, there is a group of studies for individual practice.

The third volume contains the third and fourth parts of the method. The third part is designed to cover the full range of the guitar. He begins with exercises using different patterns of adjacent fingering which are transposed by half-steps through the range of the third string. He intends that these patterns be practiced on each string and culminate in playing the chromatic scale on an individual string.

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[73]Pujol, Guitar School, 129.

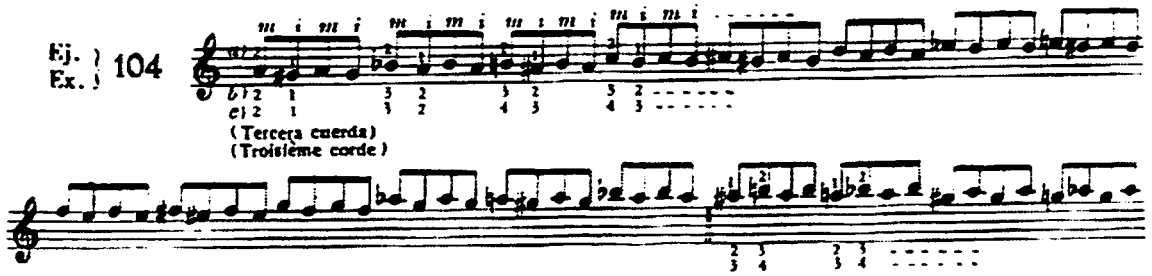

Figure 32 Single String Chromatic Exercise from the Pujol Method.[74]

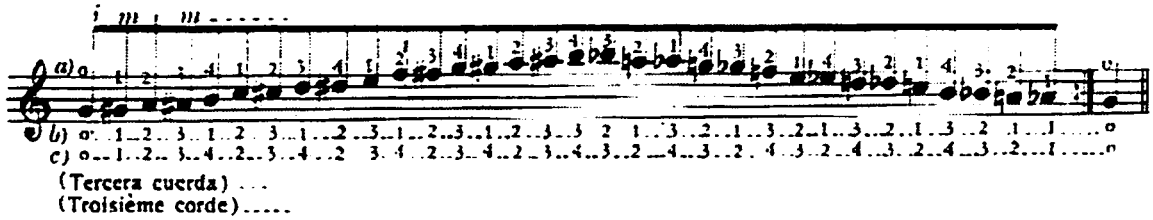

Figure 33 Single String Chromatic Scale from the Pujol Method.[75]

His next focus is diatonic single string material, which begins with exercises for reach development between the second and fourth, and third and fourth fingers. This includes diatonic patterns within a third which progress diatonically through the practical range of each string.

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[74]Pujol, Escuela Razonada de la Guitarra, Vol. 3, 26.

[75]Ibid.

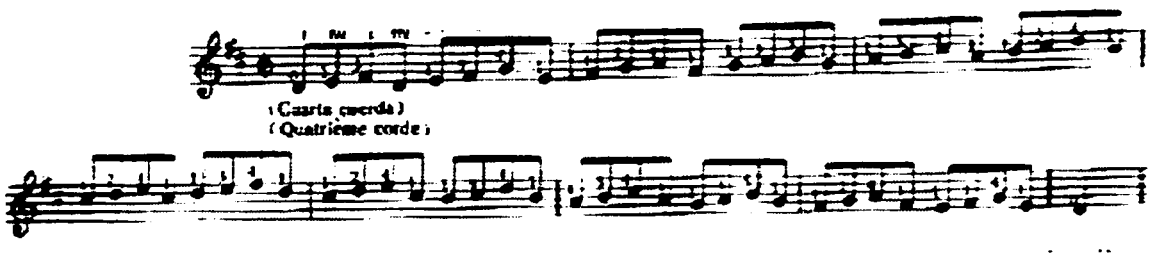

Figure 34 Exercise in a Third, from the Pujol Method.[76]

This material leads up to playing one octave diatonic single string scales both in major and minor which are similar to the single string scales in the Aguado method (see Ex. 6).

He then returns to a focus on individual positions with chromatic and diatonic scales, both in isolation, and combined with a second layer to develop independence of thumb and fingers. This portion of the method concludes with parallel thirds and chords, but with a focus on different right hand patterns.

The fourth part of the method continues the same kind of approach and materials as the end of the third with more elaborate right hand patterns. It concludes with slur technique against sustained notes and slurs moving either chromatically or diatonically through the range of a string as well as through the first position of the instrument. Slur technique is also applied to ornamentation. Finally, there is a series of studies incorporating some of the materials covered.

The fourth volume contains the fifth part of the method which deals with the development of virtuosity. He gives exercises to develop greater

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[76]Pujol, Escuela, Vol. 3, 37.

synchronization of both hands along with speed and various rhythmic formulas. This is followed by more advanced versions of the same kinds of exercises which began the third part of his method. There is a series of chromatic patterns which are shifted by half-step through the range of a string, concluding with a single string chromatic scale. There are also some single string diatonic patterns which span the interval of a fourth or a fifth, but in which the largest shift is the interval of a third, and most are by second.

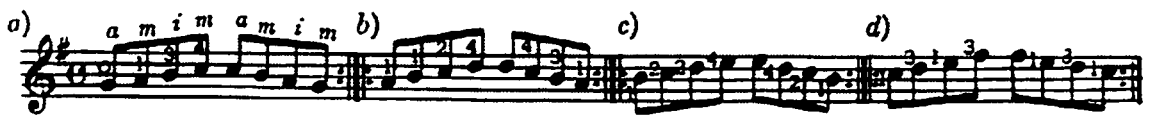

Figure 35 Different Fingerings Spanning a Fourth.[77]

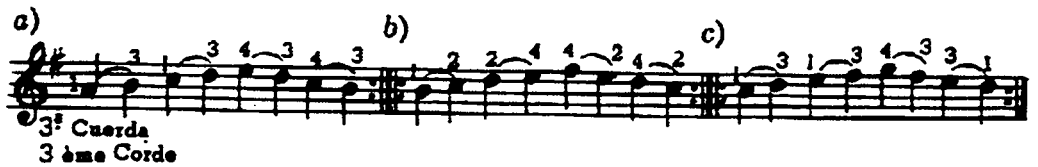

Figure 36 Slur Exercises Spanning a Fifth.[78]

The stated purpose of these exercises is not fluency over the fingerboard, but greater independence of the fingers and development of slur technique.[79]

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[77]Pujol, Escuela, Vol. 4, 77.

[78]Ibid., 105.

[79]Ibid., 77, 104.

Pujol, like those before him, develops technique in terms of positions on the guitar. He gives enough material to develop reading in the first position, but then he gives scale forms in which patterns of fingering may be memorized, and then shifted through the positions of the guitar mechanically, without an awareness of the notes being played. The memorization of patterns is useful for developing speed, but on an instrument on which there are no natural reference points (as the black and white keys provide on the piano), it does nothing for developing the sort of fluency needed to respond to a score. His diatonic single string work is given mostly in one scale form and is used as a means of developing greater independence of the fingers, a mechanical goal. Shifting beyond a fourth is not developed. The development of single string technique for the purpose of fluency on the fingerboard is not addressed either by Pujol or those following him. It remains a neglected area of development. The most extensive volume of scale technique currently available is that of Aaron Shearer (discussed below), and this focuses on single position scales. With the exception of Aaron Shearer's, most scale materials designed for guitar instruction are much less thorough than Pujol's (see discussion of Segovia scales).

Andrés Segovia

Andrés Segovia (1893-1987), the most famous guitarist of this century, was born in Spain. Although Segovia was encouraged by his family to study the piano, violin or cello, he was drawn more to the guitar. Segovia presents himself as a self taught artist who was projected to the world stage by his great talent.

> My family took me to Granada where I opened my eyes to the world of beauty. Having no teacher there from whom I could learn the technique of the guitar, I decided to name myself both pupil and master....and this association has lasted until the present time...[80]

Segovia idolized Tárrega, having "...imposed on myself the duty of following the example of Saint Francisco Tárrega...."[81] Yet, Segovia was connected to the Tárrega tradition through Llobet. Destined to be one of the most influential guitarists of this century,[82] Andrés Segovia, went to Llobet around 1917 for refinement of technique and contacts to establish concert tours in various countries.[83] This is little known, since Segovia emphasized the work he did alone.[84]

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[80]Andrés Segovia, George Mendoza, Guidance for the Beginner, Segovia: My Book of the Guitar, 10.

[81]Grunfeld, 290.

[82]Guitar Master Class, 6.

[83]Llobet, Miguel Llobet, ed. Ronald Purcell, ii. From editor's foreword.

[84]Bobri, 29

Figure 37 Segovia with Llobet.[85]

Segovia wrote very little technical literature for the guitar. He himself wrote only a few exercises for slur technique, a short volume of scales, a few studies, and an exercise in parallel chromatic scales. From his predecessors Segovia highly valued and recommended the work of Giuliani, Aguado, Sor, and above all, Tárrega.[86] Among his contemporaries, he endorsed the Etudes of Heitor Villa-Lobos.[87] His self-described principles of technique, which were also examined in detail by Vladimir Bobri in The Segovia Technique, are essentially those of Tárrega. Segovia standardized the use of fingernails for tone production, a point which Tárrega was not overly concerned with. Segovia's volume of scales contains diatonic major and melodic minor scales in three octaves, except for those keys in which only two octaves are available on the guitar. The fingerings for these scales never involve shifts of more

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[85]Llobet, Miguel Llobet, ed. Ronald Purcell, viii.

[86]Bobri, 77, 82-5.

[87]Ibid., 85.

than a third, and the shifts are not well placed within the scale. Aaron Shearer says of the Segovia scales,

> They're highly impractical. I once asked him about them, and he said that they were only intended to be shifting exercises, not practical scale fingerings. He said that he conceived them when he was 14, and didn't take the time to change them. ...His fingerings let you practice shifting along the fingerboard, but you can do that on one string. My students work on playing single-string scales on the first three strings. A lot of people still practice Segovia's scales– I dutifully worked on them for a while– but they don't have any relationship to anything else.[88]

Unfortunately, because of Segovia's legendary status, many guitar teachers recommend Segovia's scales, or use his fingerings or slight modifications of them in designing their own methods. This can be observed by comparing Segovia's Diatonic Major and Minor Scales, Frederick Noad's Solo Guitar Playing, and the Scales and Arpeggios Album of The Royal Conservatory of Music (Toronto).

[88]Ferguson, 61-3.

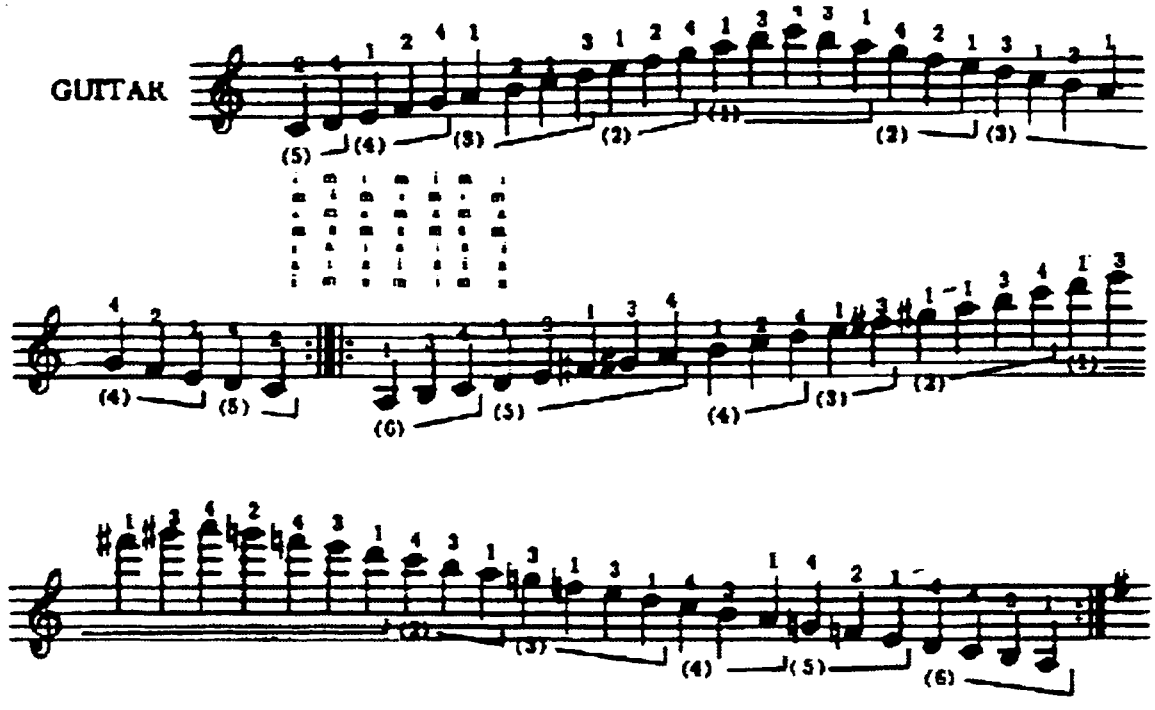

Figure 38 Segovia's C Major and A Melodic Minor Scale Fingerings.[89]

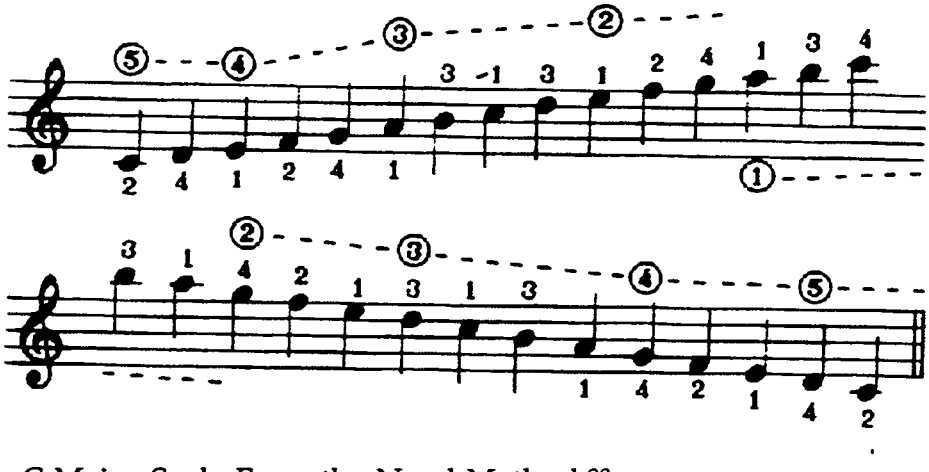

Figure 39 C Major Scale From the Noad Method.[90]

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[89]Andrés Segovia, Diatonic Major and Minor Scales, 2.

[90]Noad, Solo Guitar Playing, Vol. I, 166.

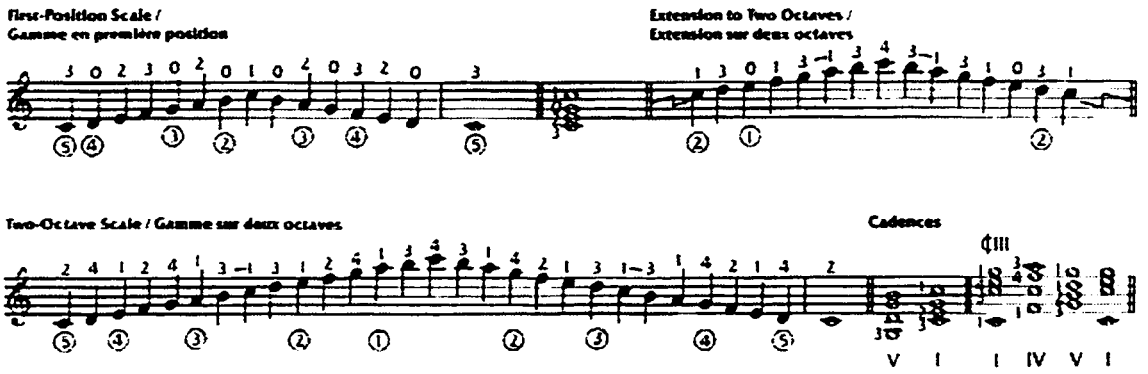

Figure 40 The Royal Conservatory C Major Scales.[91]

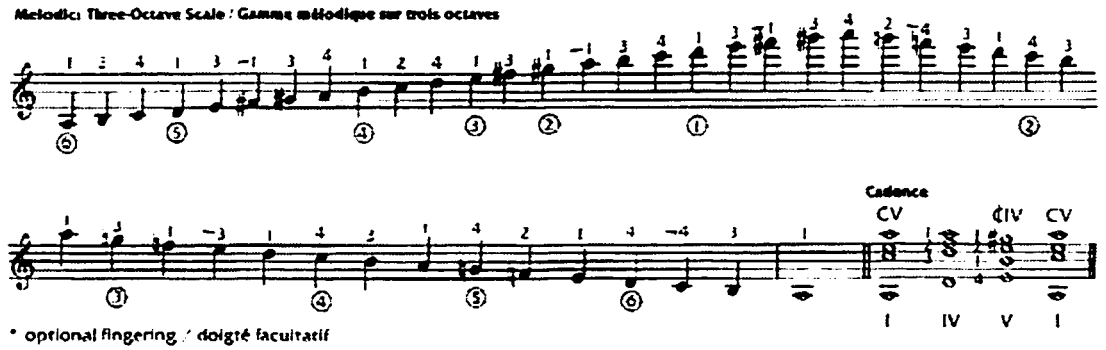

Figure 41 The Royal Conservatory A Minor Scale.[92]

The fingerings of the two- and three-octave scales in these examples are identical. Noad does not give extensive scale fingering in his method, but refers students to the Segovia scales.[93]

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[91]The Royal Conservatory of Music, Toronto, Scales and Arpeggios Album, 6.

[92]Ibid., 7.

[93]Noad, Solo Guitar Playing, Vol. I, 167.

Julio Sagreras

Julio Sagreras (1879-1942) is a guitar teacher and composer for the guitar from Argentina.[94] He wrote a Lecciones de Guitarra in six volumes which attempts to present the principles of Tárrega in a more progressive form. He speaks of correspondence with Llobet as a means of connecting his work to that of the Tárrega school. Sagreras' method begins with a brief summary of conventions of guitar notation, emphasizing the need to develop the rest stroke for bringing out melodic lines.[95] The first lessons are for playing the open strings with the right hand followed by lessons in scales covering the first position. The remainder of the first volume is in the form of short pieces mostly built around chords with some melodic activity. At the seventy-third lesson he begins moving out of the first position and shortly thereafter begins slur technique. At the conclusion of the first volume Sagreras presents two-octave scales centered around the first position in the most commonly used keys as well as a three-octave chromatic scale. The remaining volumes consist entirely of short studies. Sagreras avoided using exercises for developing techniques in abstract isolation.

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[94]Julio S. Sagreras, Julio S. Sagreras: Guitar Works, Volume 3, 48 Early Solos & Transcriptions, ii-iii. From forward by Jaime Guiscafré.

[95]Sagreras, Las Primeras Lecciones de Guitarra, 2-3.

Frederick M. Noad

Frederick M. Noad (date not found) is an important author, teacher and performer. Noad is active as a guitarist and lutenist in solo as well as ensemble settings. "...Noad grew up in England. Originally trained on the violin and piano he took up guitar in his early teens. After graduating from Oxford he came to California in 1957..."[96] Noad studied with the composer Mario Castelnuovo-Tedesco and was a performer in master classes given by Julian Bream and Andrés Segovia.[97]

> In 1966 Noad launched the award winning TV series ' Guitar with Frederick Noad' for PBS. The programs were enthusiastically received from coast to coast, and are credited with introducing 100,000 new players to the instrument. Noad has been a faculty member of the University of California, Irvine, and the California Institute of the Arts.[98]

He is most known for his transcriptions and editions of music for guitar and for his method, Solo Guitar Playing.

Noad's method is based on the Tárrega school. Like most methods discussed, Noad's begins with preliminaries, including the basic techniques such as the rest stroke and free stroke, and basics of notation. He follows the position format, starting at the first position and gradually moving through each position in the course of the method. The only major difference

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[96]Noad, from Frederick Noad Web site.

[97]Ibid.

[98]Ibid.

between Noad's method and those which precede it is an abundant use of duets. Most of the exercises in the first volume are written with an accompanying part for the teacher to play to increase musical interest. Scales are presented in the first position in the most used keys about half way through the first volume (pp. 114-115). Scale practice is discussed more extensively later in the first volume (pp. 165-167), but Noad refers students to Segovia's edition of diatonic scales for material (p. 167). In his second volume he does suggest applying rhythmic variations and motivic patterns to scale practice. The motivic patterns are similar to those in the third volume of the Pujol method (compare to Fig. 34).

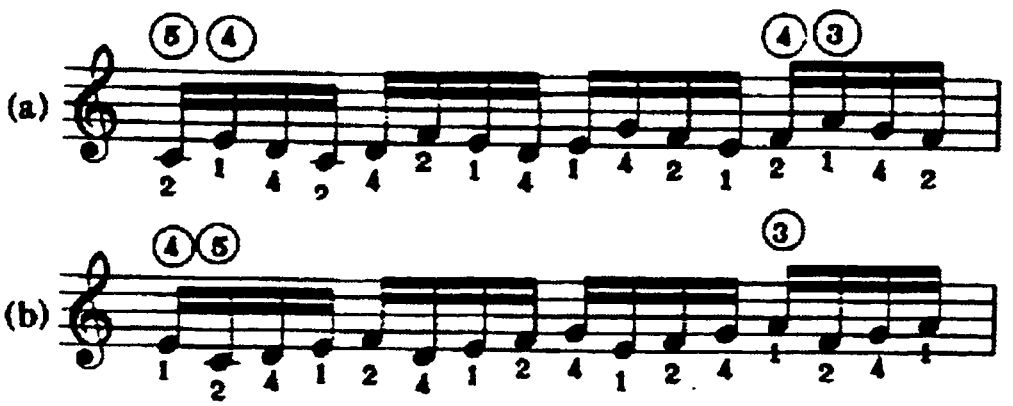

Figure 42 Noad's Motivic Patterns for Scale Practice.[99]

[99]Noad, Solo Guitar Playing, Vol. II, 27.

Aaron Shearer

Aaron Shearer (1919) is an important teacher of guitar who was Professor of guitar at the American University, the Catholic University of America (both in the Washington D. C. area), and the Peabody Conservatory (Maryland). Shearer was born and raised in Washington state "to a family of poor farmers 'back in the timberland...' "[100] At age six Shearer began playing the harmonica, and started on guitar at around ten. He developed both jazz and classical skills, and even played with Benny Goodman in the 1940s. Shearer began focusing on teaching after a "...severe case of tendonitis..." in 1949.[101] "Recognizing that classical guitar instruction lagged behind the sophisticated instruments such as the piano and violin, Shearer has spent the last 20 years formulating new...methods of technical development."[102] Shearer has written two guitar methods: Classical Guitar Technique and Learning the Classical Guitar.

Shearer's first method, Classical Guitar Technique, is divided into separate beginning and intermediate volumes with three supplementary volumes for slur and reach development (I), music theory (II), and scale patterns (III). The third of these supplementary volumes is as large as the rest of his method and supplements combined. His method, like Noad's, uses teacher-student duets in the beginning volume, but less extensively than Noad's. Shearer follows the standard position approach in his method,

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[100]Ferguson, 59.

[101]Ibid., 59.

[102]Ibid., 58.

introducing the various techniques in the same succession. The volume on scales is divided into three sections. The first part is for familiarization with the first position in most of the major and minor keys. Most of the volume is dedicated to scale forms with little shifting of position. His emphasis throughout is to know five basic fingerings for single position scales, and to develop sight reading skills in any position of the instrument. Shifting between positions is not developed extensively. Shearer does develop shifting between near positions either by sliding the same finger to the next note, sliding a finger still on the string but not just used, or by using a previously unused finger to reach the next note. Finally, he presents scales in three octaves which he explains as combinations of his five forms, and these involve some shifting of position of a fourth or less. The fingerings he uses for these longer scales are more practical than those used by Segovia.

Learning the Classic Guitar is written in three volumes. The first volume deals with such practical considerations as selecting a good teacher and instrument, the shaping of the fingernails for good tone production, good posture with the instrument, and how to avoid repetitive stress injuries such as tendonitis. The second volume contains exercises, studies and reading materials. This volume progressively introduces the first position of the guitar from single line textures to multivoice textures. There is very little abstract technique practice, as most of the material is in the form of pieces. These pieces are almost evenly divided between solos and duets. The third volume focuses on developing performance skills. It deals with musical expression, stage fright, memorization, stage presence, and other practical considerations. The material in these volumes is very well ordered but is

designed to bring a student from an absolute beginning point to an intermediate level. Shearer seems to be relying on his previous volume of scales to meet the needs of more serious players, since he includes very little scale material in this method, and all in the first position. Although he advises his students to practice single string scales to develop shifting (as mentioned above under Segovia), he has not published any single string materials.

Royal Conservatory

The Royal Conservatory of Music, Toronto, list their Guitar Series: Scales and Arpeggios Album as part of their curriculum. The scales are presented in a range available in the first position, in first position with an extension on the first string to the next octave, and then in a three-octave form which is essentially the same as Segovia's. The scales are in major, harmonic, and melodic minor. The author/source of these scales is not credited in the publication. The materials seem to be a compilation of scale types used by Carulli, Sor, and Segovia (see Figs. 12, 13).

Abel Carlevaro

Abel Carlevaro (date not found), a guitarist and composer from Montevideo, Uruguay, is credited with the most important developments of technique in the twentieth century. Some of his compositions, such as Campo,[103] have become part of the standard repertory for guitarists. Robert Vidal of the Paris International Guitar Festival stated that "Abel Carlevaro is recognized by all as the possessor of the most perfect instrumental technique in the world of the guitar."[104] He has even been recognized by Andrés Segovia, who was himself "the standard by which all guitar technique and performance is evaluated."[105] Segovia says of Carlevaro: "I have admired the path of Abel Carlevaro's artistic and pedagogic life. Today he is an illustrious maestro, admired virtuoso, and applauded composer."[106] Carlevaro's technique is in fact best summarized by the second of Fernando Sor's general maxims "to require more from skill than from strength."[107] There is little specific information available about Carlevaro's background or the development of his theory of technique (see footnote 69). Carlevaro says in an interview:

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[103]Abel Carlevaro, Preludios Americanos: #3.

[104]Carlevaro, Carlevaro Plays Carlevaro, from record jacket, no date.

[105]Guitar Masterclass, 6.

[106]Carlevaro, Carlevaro Plays Carlevaro, from record jacket, no date.

[107]Sor, Sor's Method, 48.

> "In some pieces of music, I had encountered difficulties which made it necessary for me to find better ways of playing. At times I came close to a solution, but time had to pass for me to understand that it could be easy to do that which once seemed so difficult."[108]

He also credits Heitor Villa-Lobos with giving "...birth to the modern guitar, forging a new path for it...."[109] through the technical implications of his Douzé Etudes.

Carlevaro's method is presented in a four-volume Serie Didactica para Guitarra and an accompanying book, School of Guitar (Escuela de la Guitarra): Exposition of Instrumental Theory, in which the theory of his technique is expounded in detail. The volumes of Carlevaro's method are "...not intended for primary or elementary studies, but are prepared in order to help the student in a secondary stage of more advanced evolution."[110] The first volume deals with scales. Carlevaro states in the exposition of his theory that he fingered the scales so that shifts would be approximately the same number of notes apart.[111] His emphasis is in the manner in which shifts occur rather than achieving greater knowledge of the fingerboard. Another objective in this volume is fingering with the left hand so that shifts occur in predictable

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[108]Brian Hodel, "Abel Carlevaro: Master Teacher, an Interview." Guitar Review, 10.

[109]Carlevaro, Abel Carlevaro Guitar Masterclass Volume III: Technique, Analysis and Interpretation of The guitar Works of Heitor Villa-Lobos: 12 Studies (1929), 3.

[110]Carlevaro, Serie Didactica para Guitarra, Cuaderno No. 1, from prologue.

[111]Carlevaro, School of Guitar (Escuela de la Guitarra): Exposition of Instrumental Theory, 89.

patterns. Carlevaro's objectives assume a thorough knowledge of the fingerboard, since he does not address this as an issue.

Chapter Four
Technical Summary

Classical Era Technique

During the classical era, guitarists used two right hand positions. In the most used position, which Sor describes as useful when needed to stabilize the hand, the little finger remains in contact with the face or bridge of the guitar.[112] This position does not allow changes of tone color, since the distance from the bridge at which the strings are plucked is constant.

Figure 43 Common Classic Era Right Hand Position.[113]

In the other basic approach, which was used only by Sor[114] and Aguado,[115] the right hand is free of contact with the guitar except for plucking the strings. This allows more freedom of movement and greater access of

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[112]Sor, Sor's Method, 33.

[113]Aguado, Nuevo Método, from front cover.

[114]Sor, Sor's Method, 33.

[115]Grunfeld, 190.

fingers and thumb to each string. In this position it is possible to vary the tone color by moving closer to or further from the bridge, and this is essentially the approach used today.

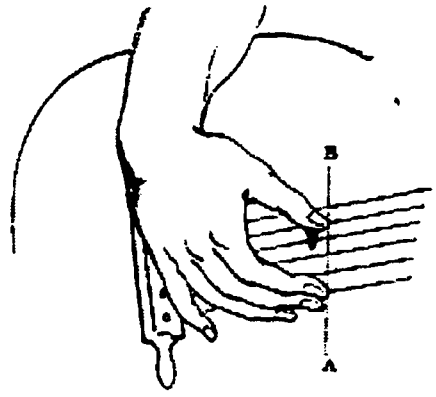

Figure 44 Diagram of a Modern/Classical Right Hand Position.[116]

During the classic era, the thumb was generally used on the lower sounding strings and the fingers for the higher sounding strings (see Figs. 12 and 14). The thumb, index, and middle fingers of the right hand were favored as strong fingers, the ring finger only being used to avoid undue awkwardness. The type of stroke described for the right hand was what now is called the free stroke. There was disagreement as to the use of nails in plucking the strings. Sor advocated using nails only for contrast and otherwise using only the skin of the finger tips.[117] Aguado used a combination of skin and nail in the same stroke.[118] He described touching the

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[116]Sor, Sor's Method, 12.

[117]Ibid., 17.

[118]Aguado, Nuevo Método, from editor's preface.

string with the skin of the fingertip and then the nail as the stroke is completed. This became the standard of tone production under Segovia's influence.[119]

The left hand technique also favored the use of strong fingers (in the left hand, the index, middle and ring) over the weak. Fingering that would facilitate maintaining a legato connection was not sought out so much as the easiest fingering available. Movements of the left hand were avoided as much as possible, and contact with the strings was maintained as much as possible.[120] This means that in shifts involving the sixth, fifth, and fourth strings, the friction of the fingers against the strings would produce finger noise.

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[119]Grunfeld, 190.

[120]Sor, Sor's Method, 30, 38.

The Tárrega School

> The great Spanish master Francisco Tárrega continued the work of Aguado and Sor. He made an important contribution to the technique of the right hand, emphasizing the supported stroke (*apoyando*) and stressing the importance of the third finger of the right hand, until then somewhat neglected. Tárrega developed and rationalized the Spanish technique of tone production.....laying the foundation for modern technique.[121]

Tárrega's innovations in technique involved equalization of the fingers of both hands. In the right hand the ring finger is developed both as the finger most often used for melodic lines, and as an equal finger for different kinds of passage work. Figures 44 and 45 demonstrate this greater use of the ring finger.

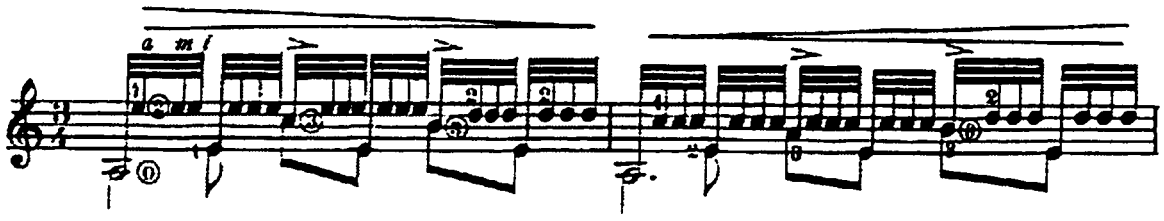

Figure 44 Francisco Tárrega, *Recuerdos de la Alhambra*, mm. 1, 2.[122]

[121]Bobri, 23.

[122]Tárrega, Francisco Tárrega, 89.

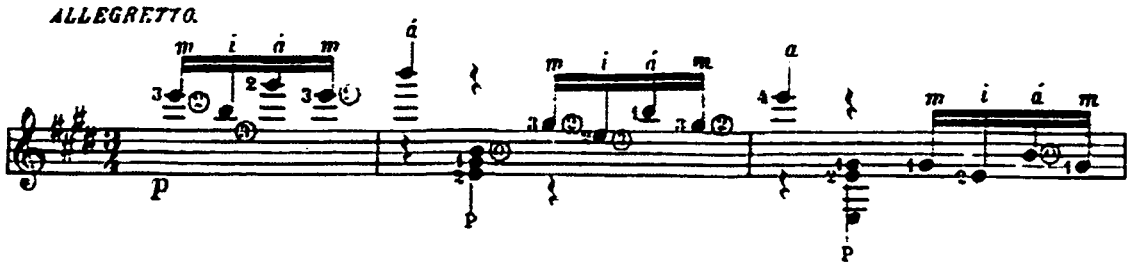

Figure 45 Beethoven, *Scherzo de la Sonata op.* 2, Arranged by Tárrega, mm. 1-2.[123]

Tárrega developed the rest stroke as a means of differentiating both the tone and intensity of a melodic part from its surrounding texture.[124] The rest stroke also was applied to single-line passage work, which increased the stability of the right hand by both keeping the fingers close to the strings and eliminated the possibility of accidentally sounding the adjacent string with the follow-through from the stroke. Segovia added a refinement to the right hand technique which increased security for both rest and free strokes. When not otherwise needed, Segovia kept in contact with the lower strings. He kept his thumb on an adjacent string during passages of free strokes (thus preventing accidentally sounding an adjacent string), or on the next further string during passages of rest strokes. This further stabilizes the hand without impairing mobility in any direction.

In the Tárrega school, the principles of left hand technique did not change drastically, but the approach to fingering did. Music is fingered to maintain its musical coherence. Legato connection of musical ideas is an

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[123]Tárrega, Francisco Tárrega, 69.

[124]Pujol, Guitar School, 50-51.

ideal. On the other hand, the thumb was still used as an opposing force, and the fingers still maintained contact with the strings during shifting.[125]

The Carlevaro School

The principles of fingering developed in the Tárrega school are retained by Abel Carlevaro, although the manner in which the fingers of both hands are used is modified. Generally, the physical basis of his technique is the use of larger hand and arm muscles in preference to smaller ones as much as possible.[126] In right hand technique, the principle of rest stroke and free stroke is abandoned in favor of what Carlevaro terms "fixation."[127] What this refers to is involving more or less of the finger/wrist/arm combination in sounding the strings. As more force is required, the larger muscles are increasingly brought into play. For the softest articulation, the axis of movement is the second joint of the finger playing (this is similar to the free stroke). For louder articulation, the last joint of the finger is the axis of movement (this produces a tone similar to the rest stroke). For the playing of chords, the axis of movement is the wrist, or even the arm. Whatever the axis of movement, the remaining joints between the axis and the string/s are held firm (fixed) so as to transmit the impulse to the string. Carlevaro states

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[125]Tárrega, Francisco Tárrega, 89.

[126]Hodel, 11.

[127]Carlevaro, School of Guitar, 22-3.

that the degree of fixation is not absolute but minutely gradual, and can be combined so that force from the arm or wrist can be added to the different finger strokes.[128] An important result of this principle is the ability to differentiate the simultaneous strokes of different fingers on adjacent strings.[129] Carlevaro does not discourage having a follow-through from a stroke that brings it to rest against another string, but he does bring the focus to what was happening on the string being sounded.[130]

For left hand technique, the role of the arm is greatly increased. Carlevaro advocates using the arm for as much of the left hand movement as possible. Rather than using the thumb as the opposing force for the fingers, the thumb acts as a reference point while the arm provides the main force to depress the strings.[131] The fingers should maintain a natural form as much as possible and work as a single unit as much as possible. The job of the fingers under the older schools, is to both create the shapes needed and to apply pressure against the thumb to stop the strings as needed. Under Carlevaro's approach, the fingers achieve the shapes desired with as little movement as possible (the arm providing as much of the movement as possible) and the arm pulls the strings against the fingerboard.[132] Releasing the fingerboard becomes not an act of releasing each of the fingers involved, but of one movement of the arm. Likewise, the differences of strength between the

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[128]Carlevaro, School of Guitar, 50.

[129]Ibid., 48.

[130]Ibid., 54.

[131]Ibid., 71.

[132]Ibid., 64.

fingers are equalized by the consistent strength of the arm. In changes of position under the earlier schools, the fingers are to maintain contact with the strings as much as possible, and the thumb is to maintain some degree of opposition to the fingers, which the arm must fight in order to pull the hand to its destination. Under the Carlevaro school, the fingers are moved off the fingerboard (perpendicular to the string) and the thumb gives no opposing force. This both eliminates much effort from playing, and also eliminates the noise resulting from friction against the wound strings.

Musical Consideration of Carlevaro's Technique

The guitar as a plucked string instrument has certain properties with musical implications. The dynamic range is small compared to the piano or the violin. The rate of decay following attack is relatively quick. Plucking a string causes the string to stop sounding, however briefly, between attacks. Changes of position under the schools preceding Carlevaro often resulted in string noise which was very marked during the decay of sounds that are soft to start with. During the change of position, unless a glissando is called for, the string noise could even occur during that moment of silence, making it stand out in relief. Recordings of such notable representatives of the Tárrega school as Segovia, Julian Bream, and Manuel Barrueco contain obvious finger noise from friction against the strings.[133] Using Carlevaro's approach,

[133]Any recording of the above artists would demonstrate this point. Examples include the following: Andrés Segovia, guitar, Segovia: Golden Jubilee, Julian Bream, guitar,

all unwanted noise is eliminated, and the changes of position are executed during that brief silence and with less effort.[134] The result is a physically more efficient system with a musically superior result.

Conclusion of Part One

With regards to the topic of this paper, all of the methods presented are inadequate. Aaron Shearer states that..."guitarists generally have a long way to go in order to reach the level of some of the other instruments, such as the piano. The piano's tradition and level of development is awesome."[135] As demonstrated above, shifting technique in single-string scales has not been thoroughly developed by the major teachers for guitar. The most thorough treatment of scales is the volume by Aaron Shearer, which has been shown to be lacking in this regard. The most important technical developments of the twentieth century are recognized to be those of Abel Carlevaro, whose contributions to the guitar are beneficial both physically and musically. But although Carlevaro has renovated guitar technique, he addresses his materials to advanced players. His focus is on the manner of execution leaving knowledge of the instrument to the guitarist's other resources.

Villa-Lobos: The Twelve Etudes for Guitar and Suite Populaire Brésilienne, and Manuel Barrueco, Guitar, 300 Years Of Guitar Masterpieces (see Sources Consulted).

[134]The following recordings are devoid of finger noise despite the difficulty of the pieces performed: Abel Carlevaro, Carlevaro Plays Carlevaro, Abel Carlevaro, The Guitar Virtuoso: Carlevaro's Art(see Sources Consulted).

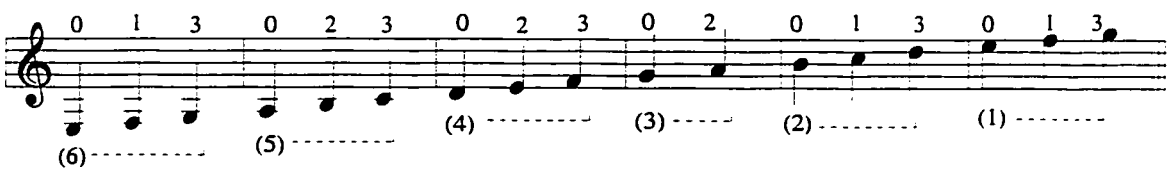
[135]Ferguson, 63.

Part Two
Single String Training for Scales
Preliminaries

These shifting exercises and scales are designed to develop fluency in moving through both near and remote positions on the guitar. They were developed by necessity, since such materials were unavailable to me as a student. I used the principles of Sevcik's Op. 8, Shifting the Position and Preparatory Scale-Studies for the Violin as my model for developing the exercises and scales that follow. Additionally, I give a technical orientation for applying the principles of the Carlevaro school to the use of the left hand and arm to single string shifting. Right hand fingering will be discussed, but is not the focus of this material. Exercises and scales are given in the twelve key signatures (not counting enharmonic equivalents) which are normally used in tonal music, but without emphasizing a tonal center. The material presented here is an excerpt from a larger guitar method which I am in the process of preparing for publication.

Musical Orientation

Many guitarists learn to play without really understanding notation as symbolizing sound. Instead, because the initial conception of the fingerboard is based on the first position, notation is thought of in the same way as tablature: as indicating location on the instrument instead of representing sound. This is because every pitch on the staff has only one location in the first position of the guitar (in Ex. 7, barlines distinguish guitar strings).



Example 7 Diatonic Pitches in First Position.[136]

Therefore, instead of indicating the positions needed for each shift, I will notate the pitches and give guidelines for fingering. For guitarists not accustomed to thinking in terms of pitch, the following may be helpful. The natural pitches used in western music are named from the first seven letters of the alphabet: A, B, C, D, E, F, and G. Adjacent pitches are a whole-step apart, with the exception of the combinations B-C and E-F which are each one half-step apart. The frets of the guitar are each one half-step removed from the next along each string. So, if starting from the sixth string, which is E, F would be found by stopping the first fret of that string, since each fret is one

[136]Original Example.

half-step. To play a G, which is a whole-step, the string would be stopped at the third fret (two frets from F). Rather than thinking in terms of what number the fret is, it is recommended that the distance between the pitches be visualized.

Shifting by Interval

The exercises do not include position indications. Instead, patterns will span progressively larger intervals. Each interval will have a number of patterns applied to it to develop fluency in moving through progressively larger segments of the fingerboard. The patterns will have string indications and some left hand fingering.

Technical Orientation

1. Place all the left hand fingers on the sixth string so the posture of the hand is as shown in Fig. 46. Touch the string, with the tip of each finger just behind successive frets one through four, without applying any pressure with the fingers. Keeping the fingers slightly firm (as you would while carrying a book) use your arm to pull your fingers toward the fingerboard until the string is against it. Use your arm in the opposite direction to take your fingers off the string. During this the thumb may maintain contact with the neck, but should be relaxed, not applying any force. Repeat this exercise until the

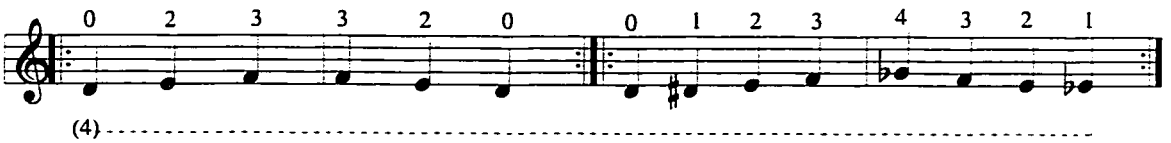
motion feels natural. The fingers should fall on the string and leave the string as one unit.

Figure 46 Left Hand Posture.[137]

2. Beginning with the posture of the previous exercise, move the fingers from the sixth string to the fifth, doing so entirely with the arm. The fingers should not change posture to anticipate the arm's movement. The thumb should be allowed to follow the hand freely across the fingerboard.

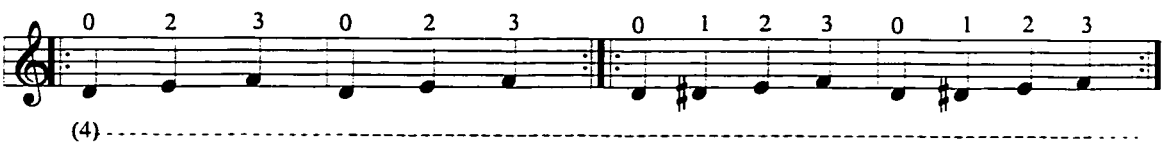
[137]Original photograph.

3. Play the following patterns. Leave all left hand fingers down as successive ascending pitches are played. Each finger should stop the string just behind the fret. This eliminates the need to find the pitches a second time when playing descending pitches. Release the fingers one by one as needed to sound each descending pitch. This release should not be abrupt, but gradual. It should be more like letting go of a glass when setting it down than springing back from a hot iron when burned.



Example 8 Practice Ascending and Descending Fingerings for the Left Hand.[138]

4. Leave the fingers on the string as the ascending pattern is played. Lift the fingers from the string as a unit using only the arm. Use the arm only to bring the first finger needed back to the string.



Example 9 Practice Ascending Fingerings Only.[139]

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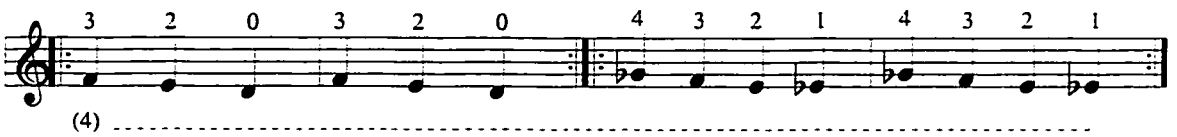
[138]Original Example.

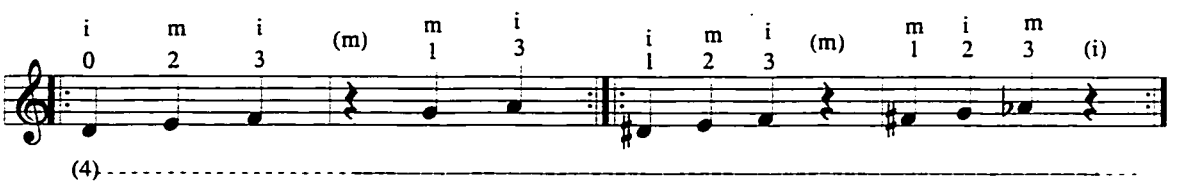
[139]Original Example.

5. Place all fingers that are needed for the descending patterns on the string together with a single movement of the arm, releasing them one by one as the pattern is played. The fingers should be spaced to fall just behind the frets. This should be done while not touching the string, but above it.



Example 10 Practice Descending Fingerings Only.[140]

6. Leave all fingers down during the ascending patterns. Shift during the rest, releasing the fingers from the string with a single movement of the arm, and executing the shift in a shallow arc placing the first finger at the new position with the arm only.



Example 11 Practice Ascending Patterns With Shifts.[141]

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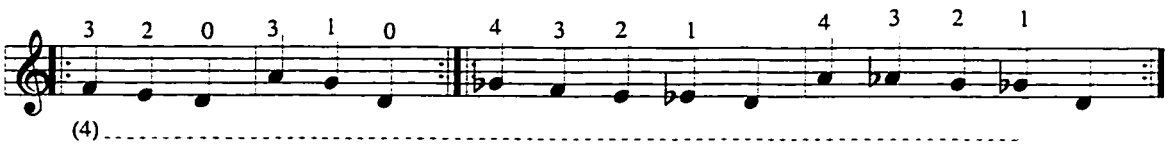
[140]Original Example.

[141]Original Example.

6. Place all fingers to be used in the descending patterns on the string with a single movement of the arm. The fingers should be the proper distance for each to be just behind its fret, and this adjustment should be done while the fingers are still not touching the string.

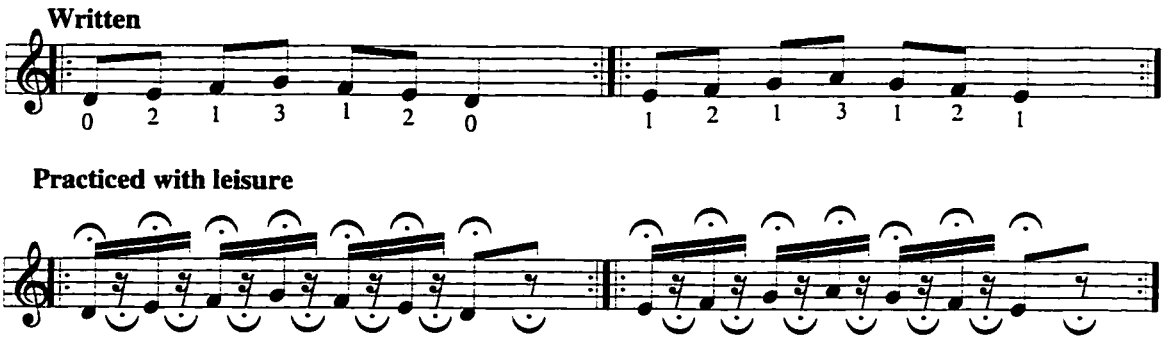


Example 12 Practice Descending Patterns with Shifts.[142]

This summarizes the principles of shifting on one string. The exercises that follow can be practiced in a variety of manners. Below are a few approaches that I would recommend.

1. Play with an exaggerated non-legato by placing the next right hand finger to be played on the string between strokes.

[142]Original Example.



Example 13 Practice with Leisure.[143]

Perform changes in left hand fingering during these silences, taking care to produce no unwanted sounds during changes of position or fingering. At first take whatever time is needed to perform the left hand motions during this silence with relaxation and control. Then, never moving so fast as to feel rushed or tense, make the silence take one half of the value of each note. Gradually shorten the silence until it is imperceptible. Fingers should always leave strings perpendicular to the string and without noise. The entire change of position and initial application of pressure at the new position should be done with the arm only. This process can be used to smooth out transitions in any passage.

[143]Original Example.

2. Practice with the left hand fingers touching the string, but without depressing it at all. Gradually increase the pressure from the arm until a clean tone is achieved (it is acceptable in this process to let the string buzz until this point). This is an excellent way to become sensitized to the minimum pressure needed to play, and can be applied to any passage.

Right Hand Fingering

The development of right hand technique is best begun in isolation. The following general comments hold true for either the Tárrega school or that of Carlevaro. I will not go into great detail in right hand technique here, since I will be addressing that in my method, and I wish the focus here to be on developing left hand technique.

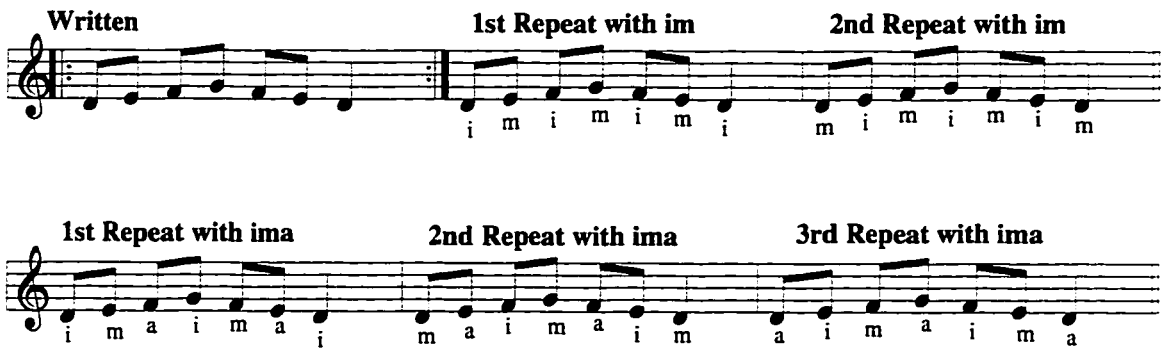
The thumb should be, unless the fingers are playing on the sixth string, at rest on the adjacent lower string (excepting the use of the rest stroke of the Tárrega school, in which case it should be one string further away). It should also be kept out of the path of the fingers. The fingers should be drawn across the strings without forcing them. Jerky motions should be avoided and fluid motions developed. Fingers should be alternated in an ordered pattern. The following patterns need not be used every day, but combinations of patterns should be used so that no finger is neglected in the course of practice.

Right hand patterns:

im, ia, ma, ima

mi, ai, am, ami

The exercises should be repeated a number of times. During the exercises, allow the right hand fingering to continue in strict alternation of the pattern used. This will often result in the right hand pattern shifting over the beat pattern of the exercise, thus developing greater evenness for the right hand.



Example 14 Alternation of im, ima.[144]

These exercises should be practiced with a high level of concentration as to the details of technique discussed. Although the patterns are repetitive, they should be practiced with active attention rather than passive repetition. The feeling of relaxation, or leisure in how the physical movements are

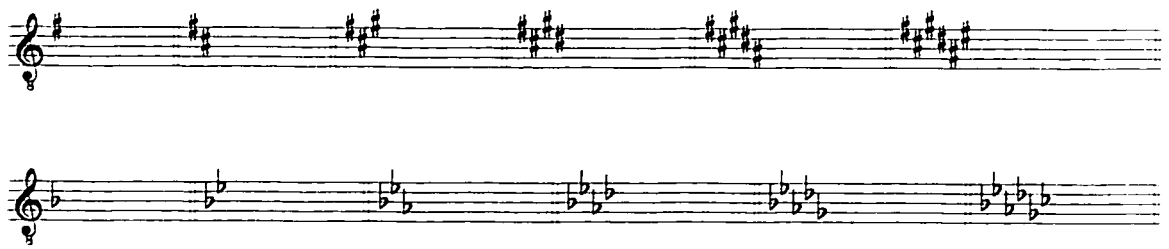
[144]Original Example.

practiced is important. The feeling of ease which is cultivated will become habitual in this way.

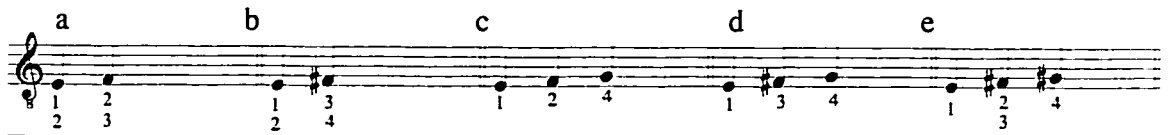
The exercises have mostly been written in complementary pairs. The pairs are clearly indicated by their numerical designation (I and Ia, for example). I recommend practicing one pair at a time until it is fluent.

Single-String Shifting and Scales

These exercises should be played as written, and also in the following key signatures. The fingering should be adjusted to allow for the redistribution of whole and half steps caused by each key signature.

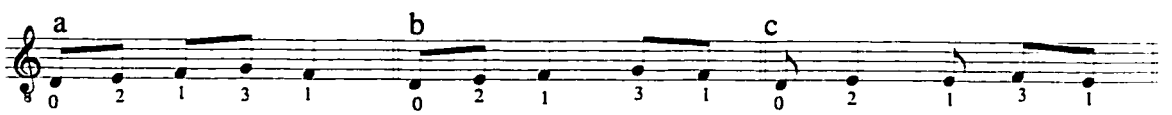


The first exercise is written out in full. The remainder are written only on the sixth string, but should be played as modeled by the first exercise. Ex. 15 shows the fingerings which are most used for the arrangements of half and whole steps in scales for the guitar. When two consecutive whole-steps are taken under three fingers (Ex. 15e), fingers 1, 2, and 4 should be used in the lower registers, since the index is stronger and gives more overall reach. In the upper registers,fingers 1,3, and 4 are acceptable.



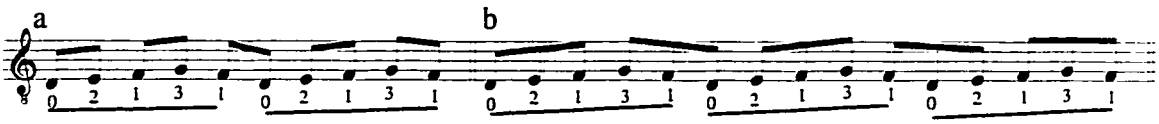
Example 15 Scale Segments with Two or Three Fingers.

I purposely omit time signatures in these exercises. The basic patterns can be played freely, or with different kinds of rhythmic flow. The exercise in Ex. 16a can be varied simply, as in Ex. 16b, or c.



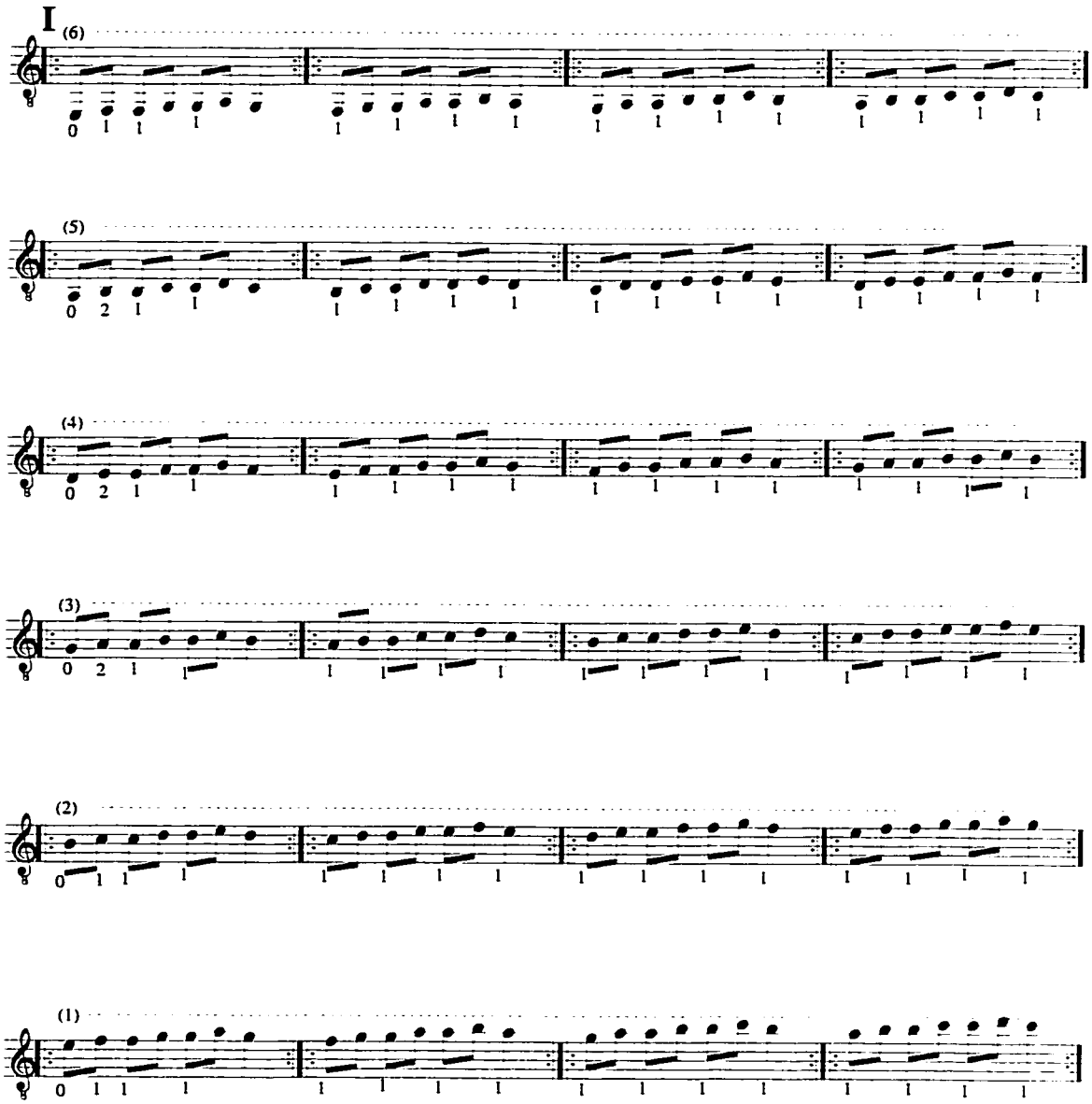
Example 16 Simple Rhythmic Variation.

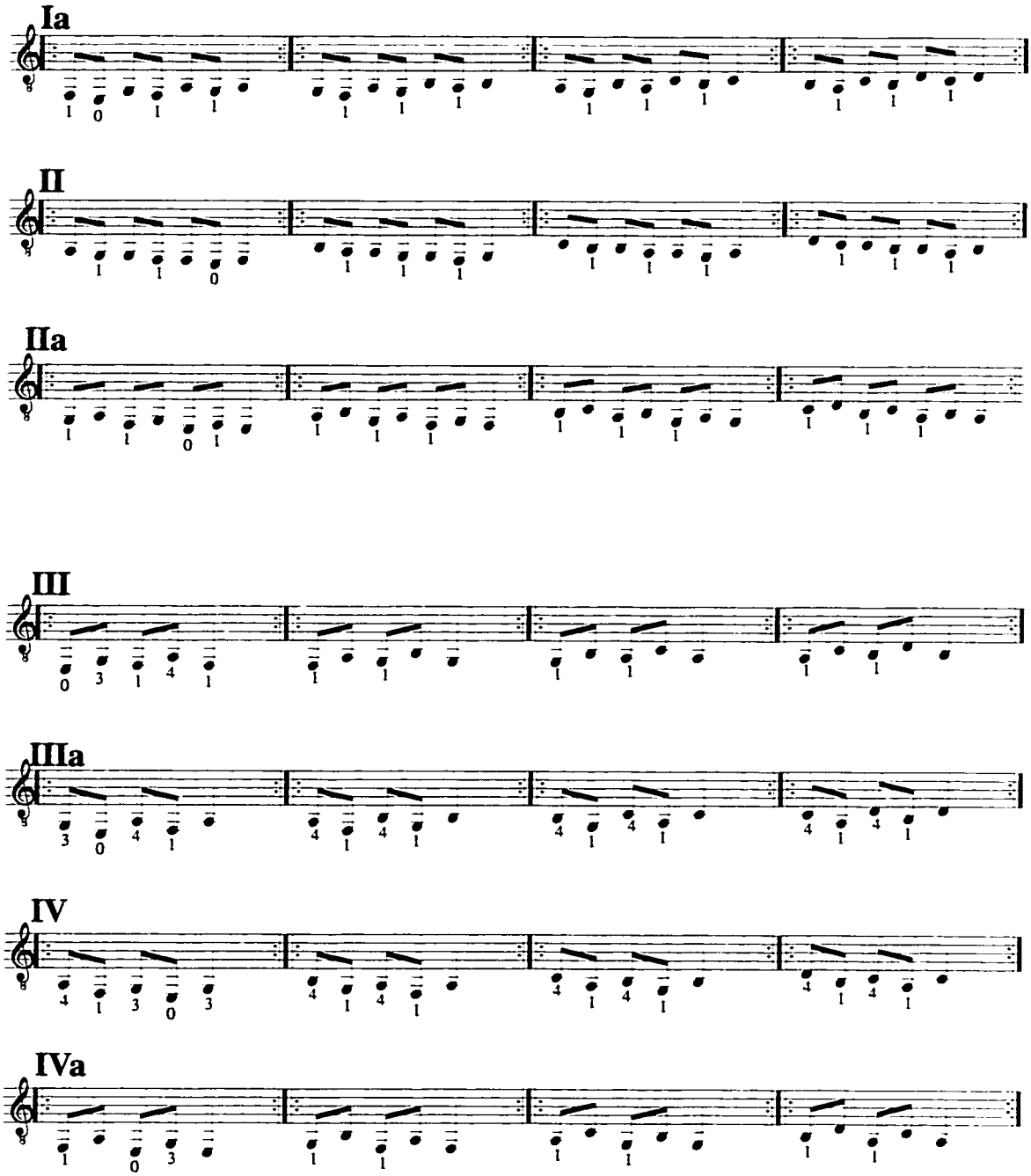
The exercises can also be strictly repeated over different rhythmic groupings which are of a different length. This will cause the exercise to shift over the rhythmic pattern. In Ex. 17a, a five note figure is shifting over a duple rhythm, and in Ex. 17b over a triple rhythm (the pattern is underlined for clarity).



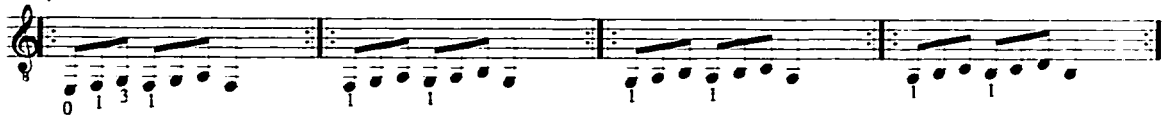
Example 17 Cyclic Rhythmic Variation.

Shifting Within a Fourth

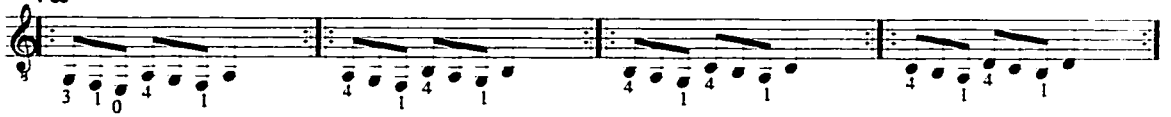



Ia
II
IIa
III
IIIa
IV
IVa

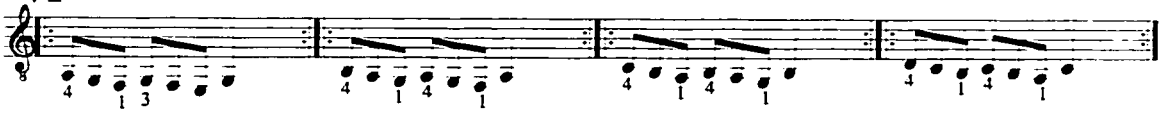
V



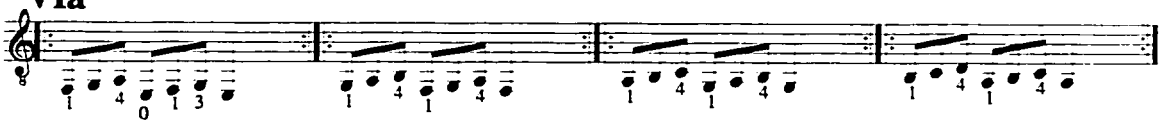
Va



VI

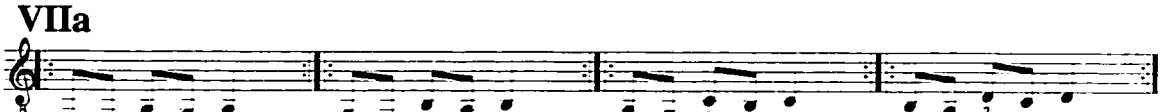


VIa

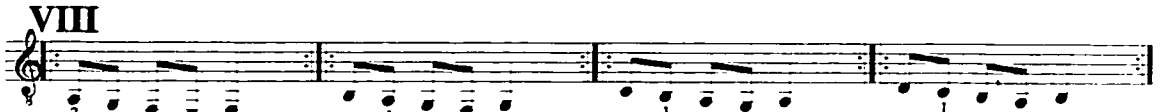


VII

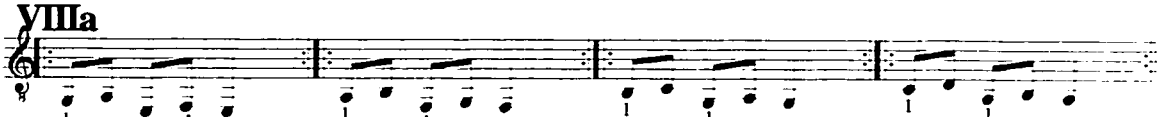
VIIa

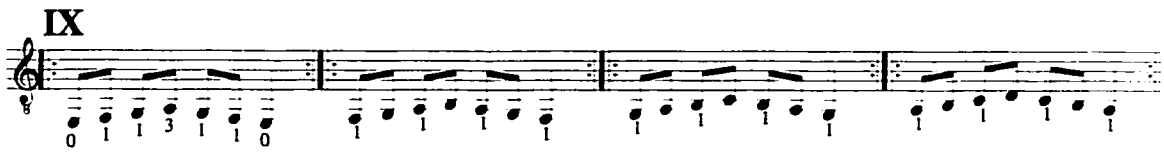


VIII

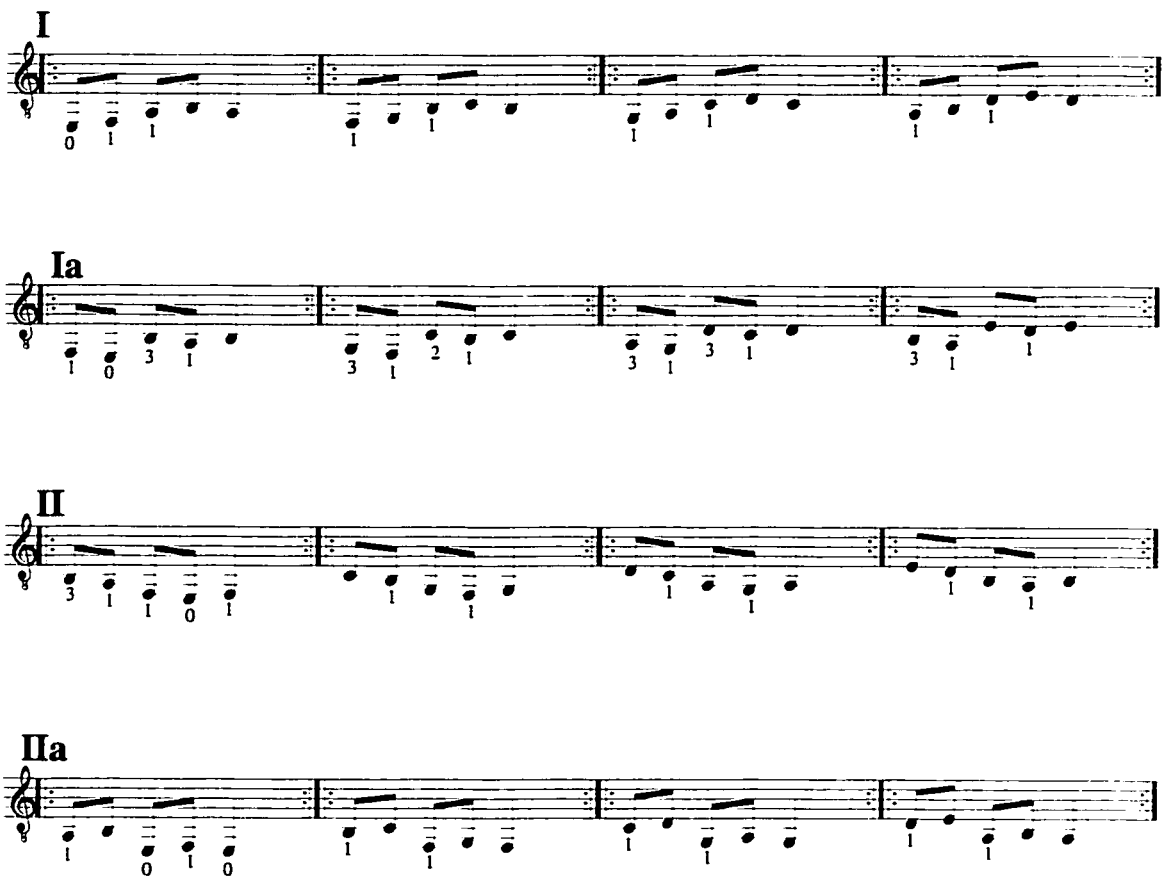


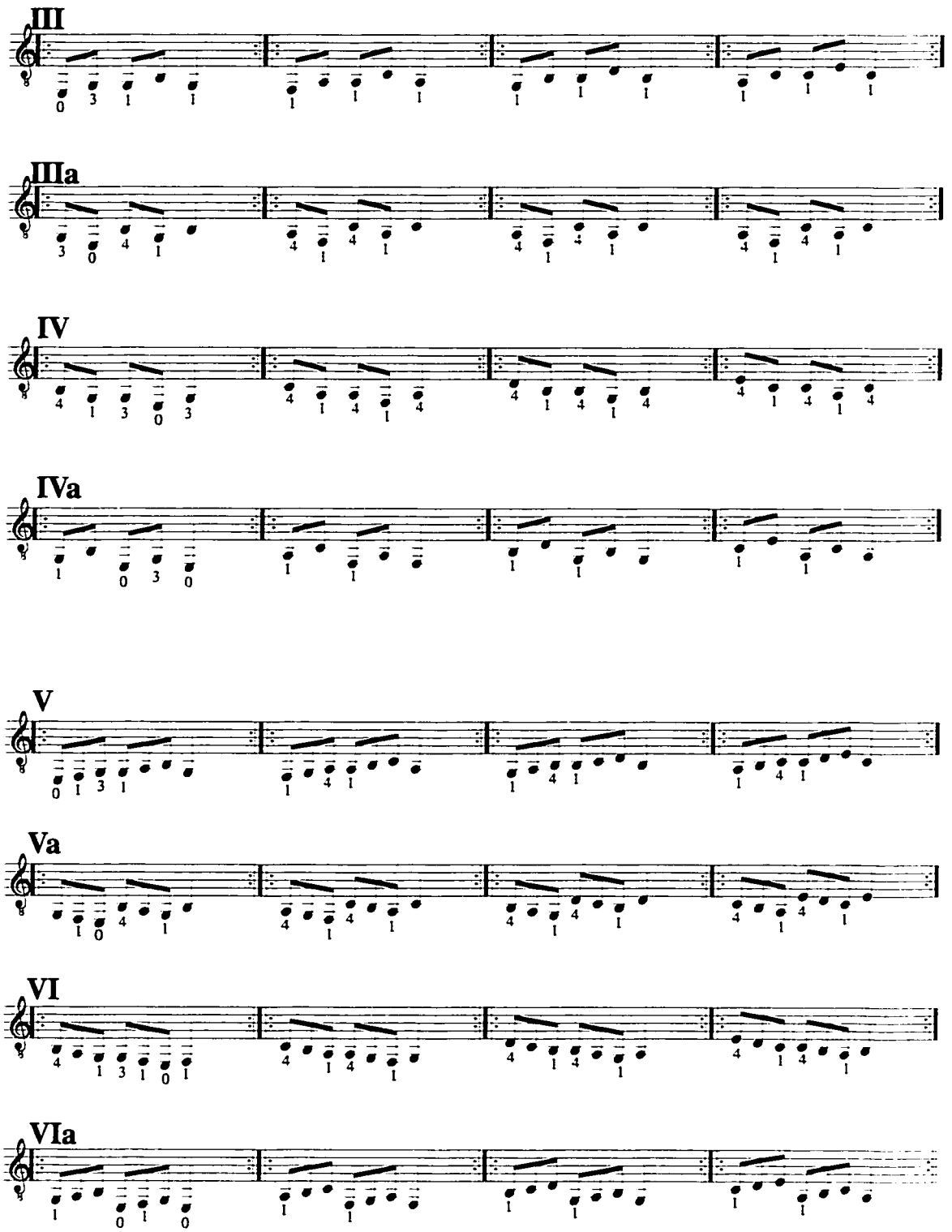
VIIIa





Shifting Within a Fifth

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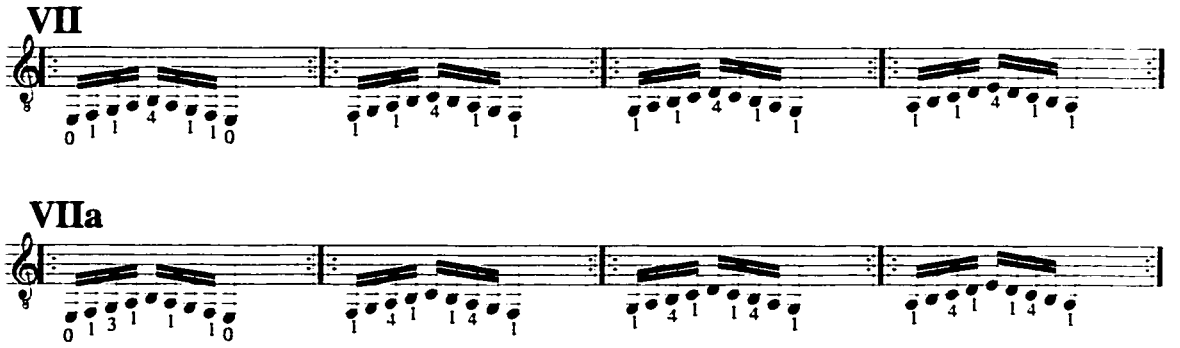

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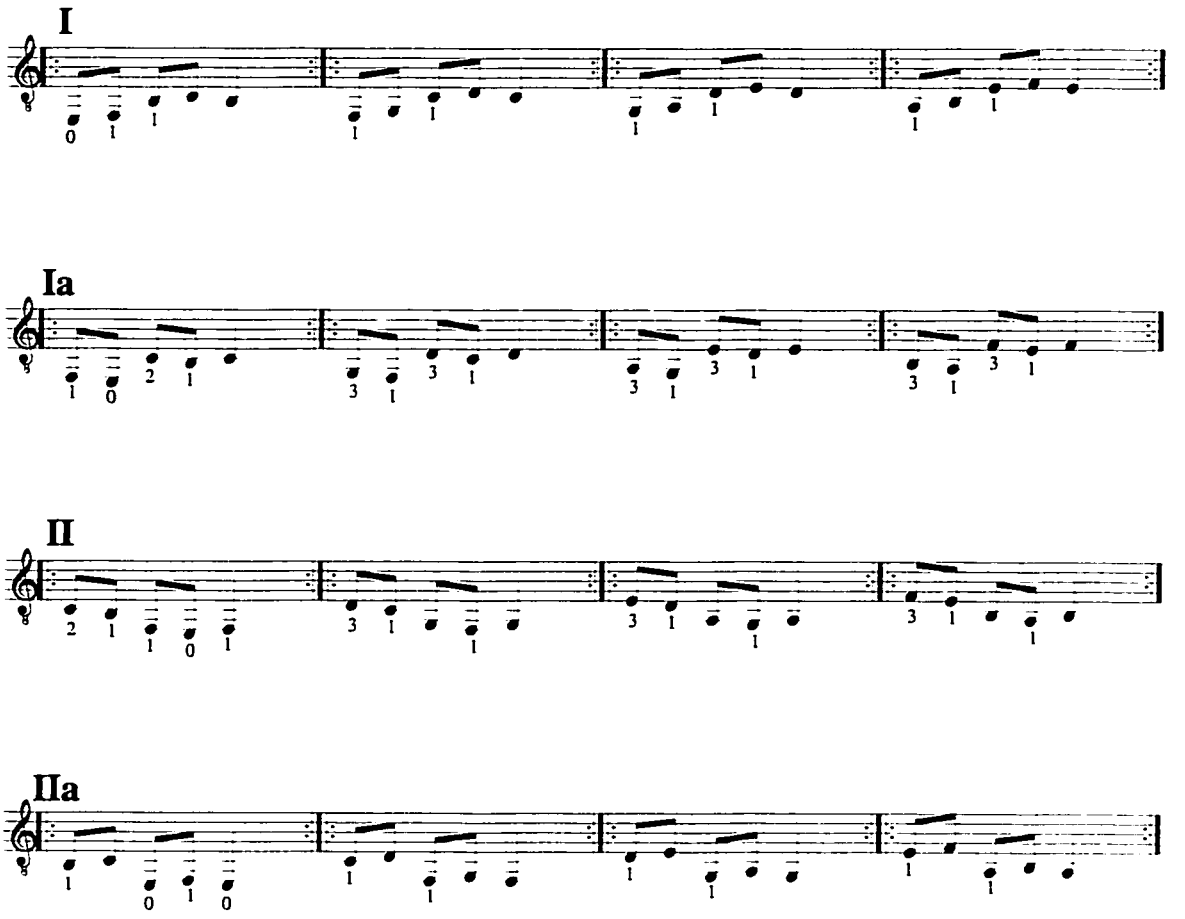

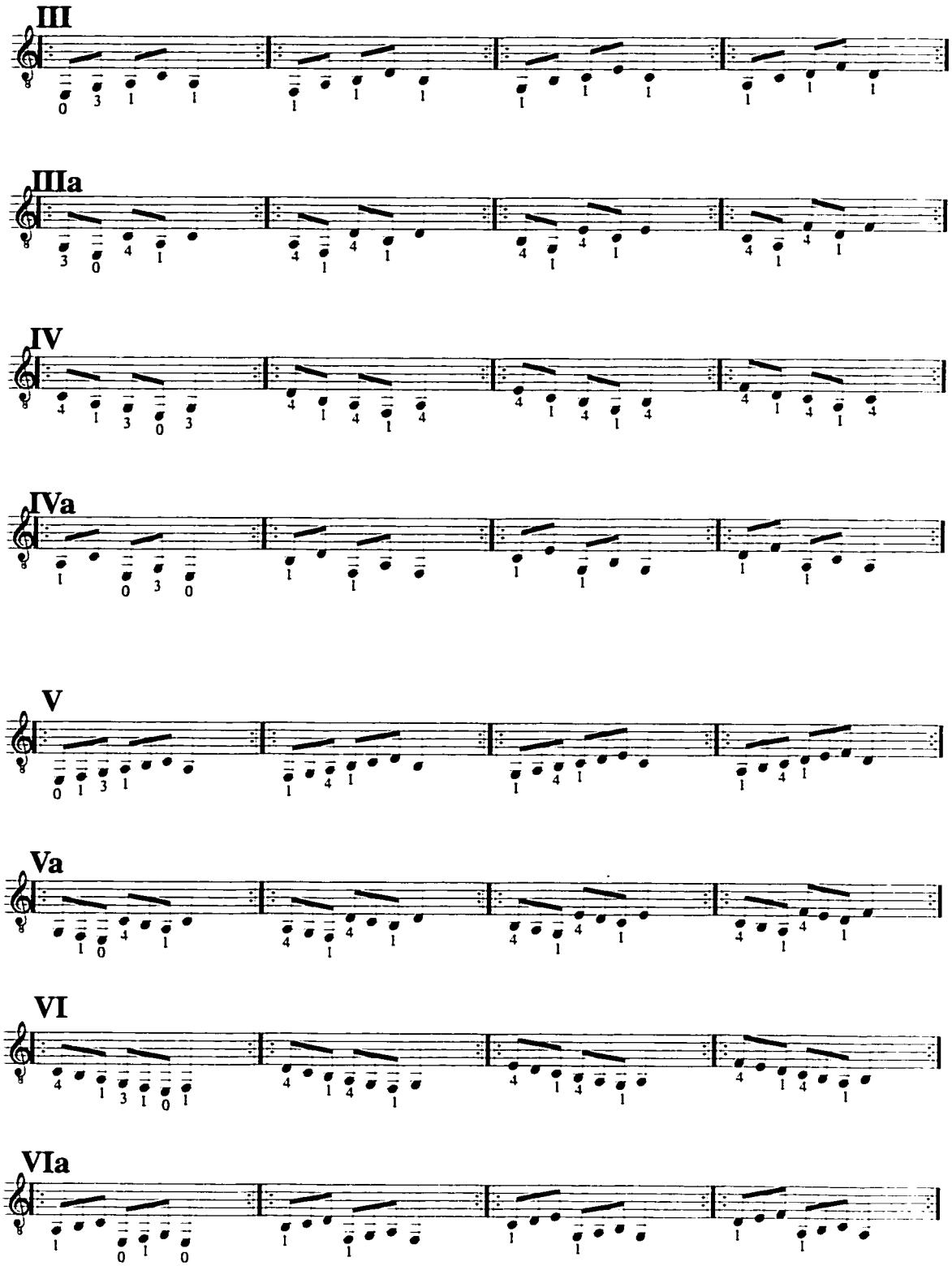
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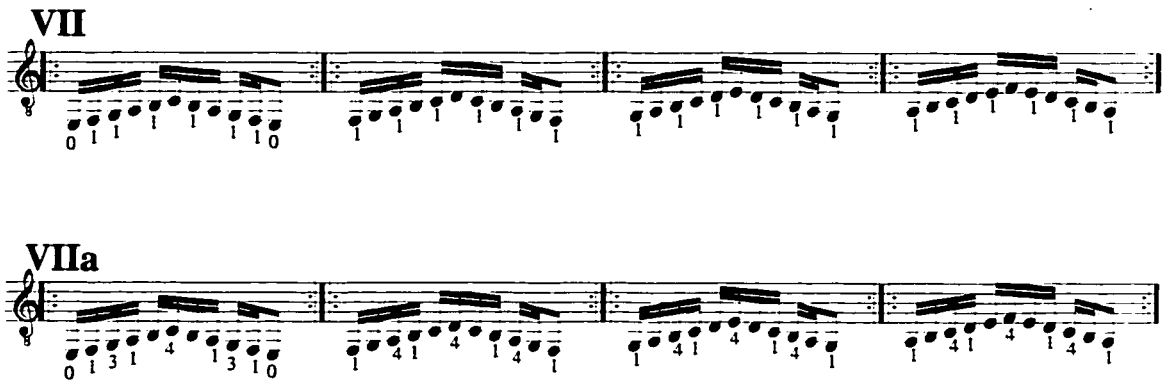

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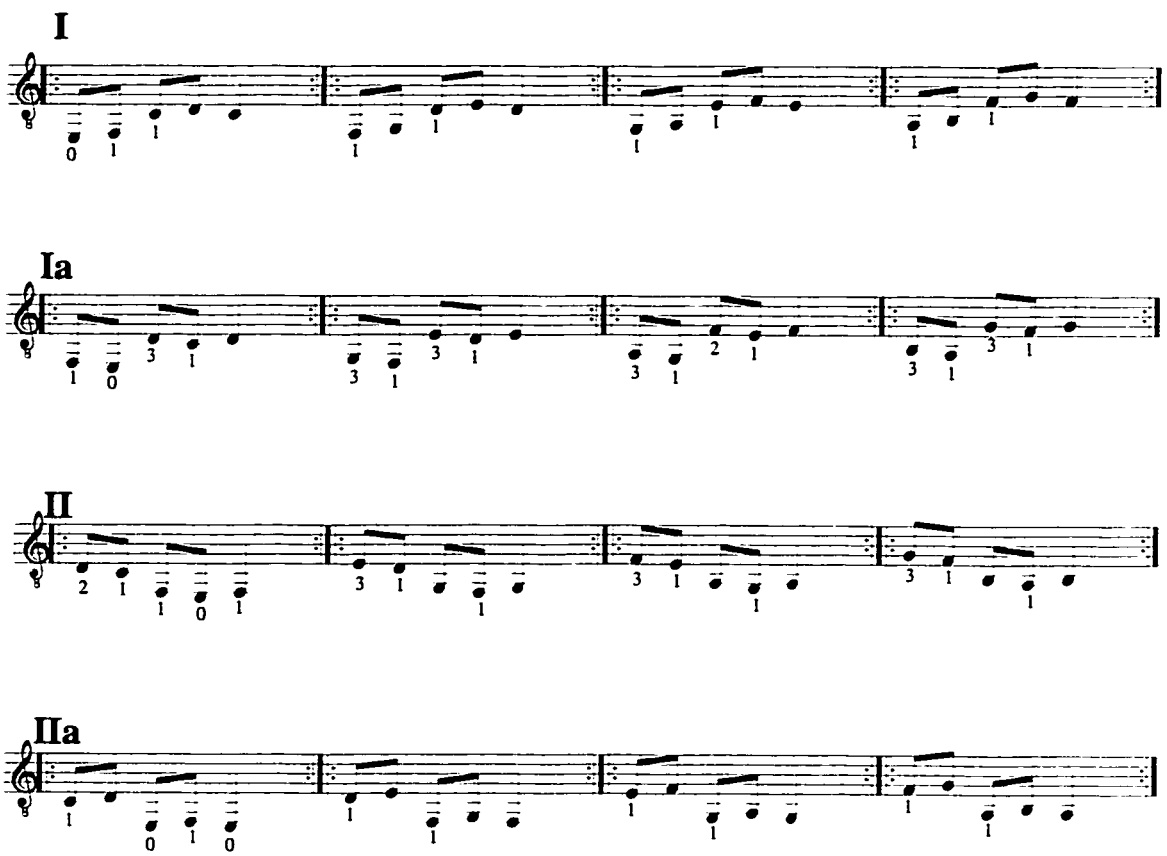

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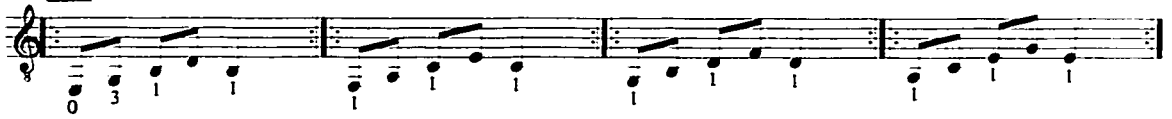

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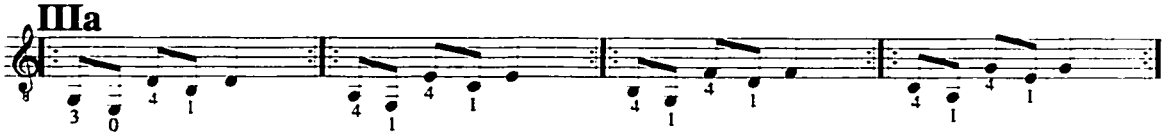

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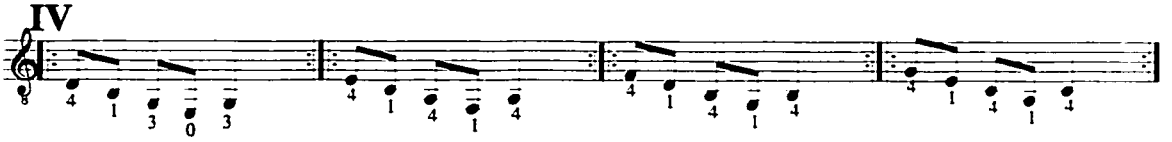

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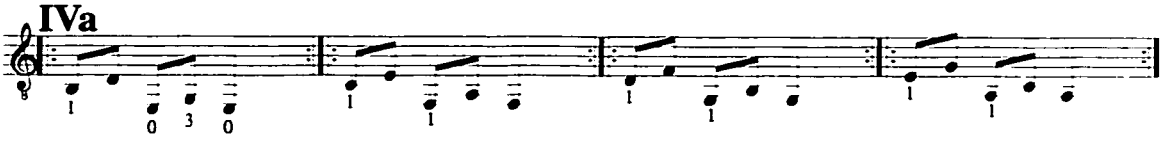

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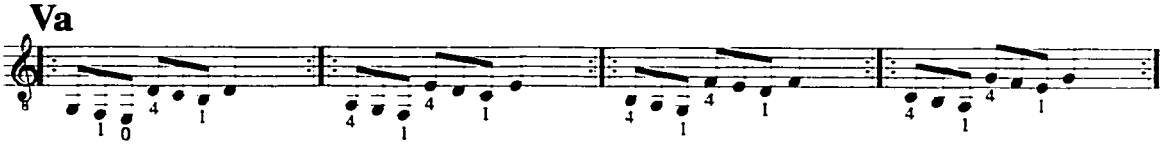

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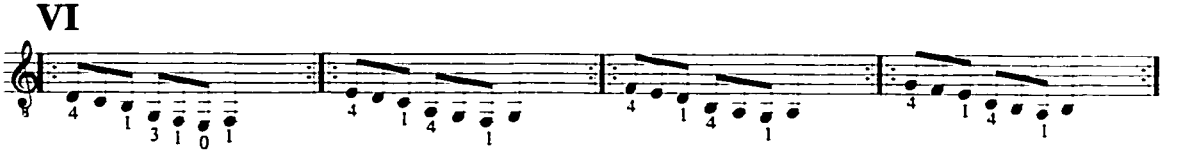

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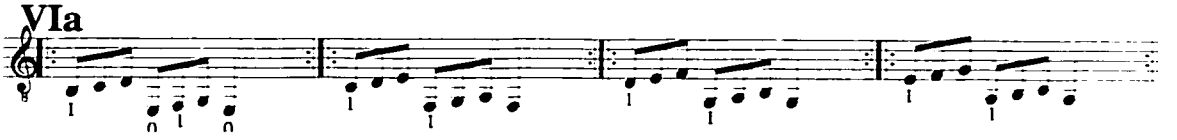

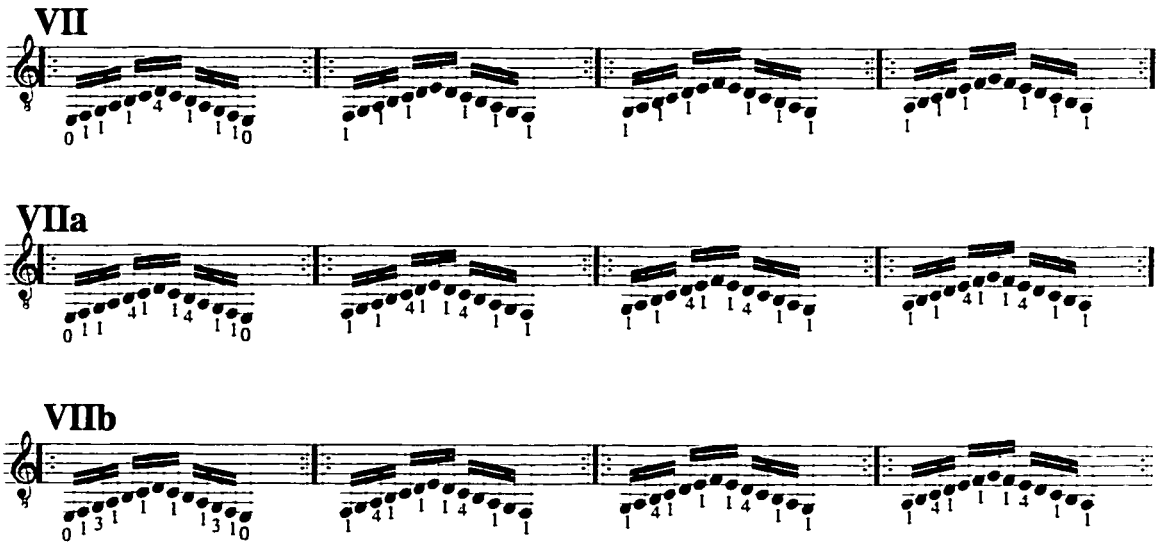

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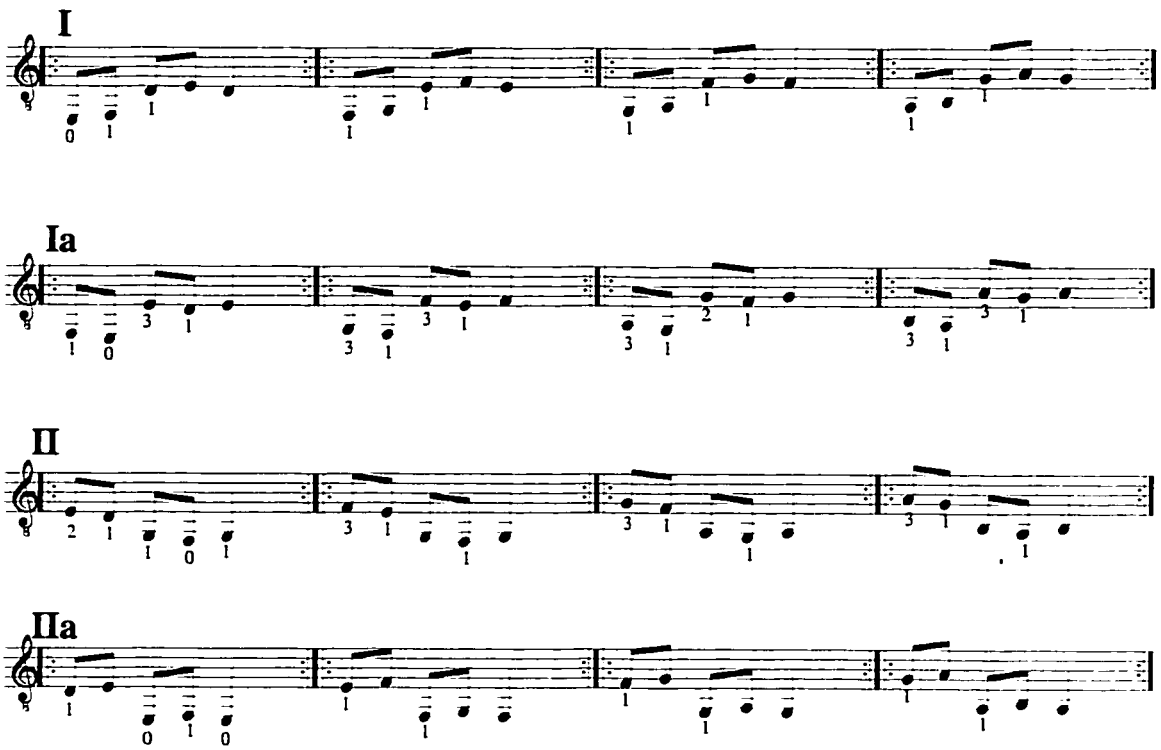

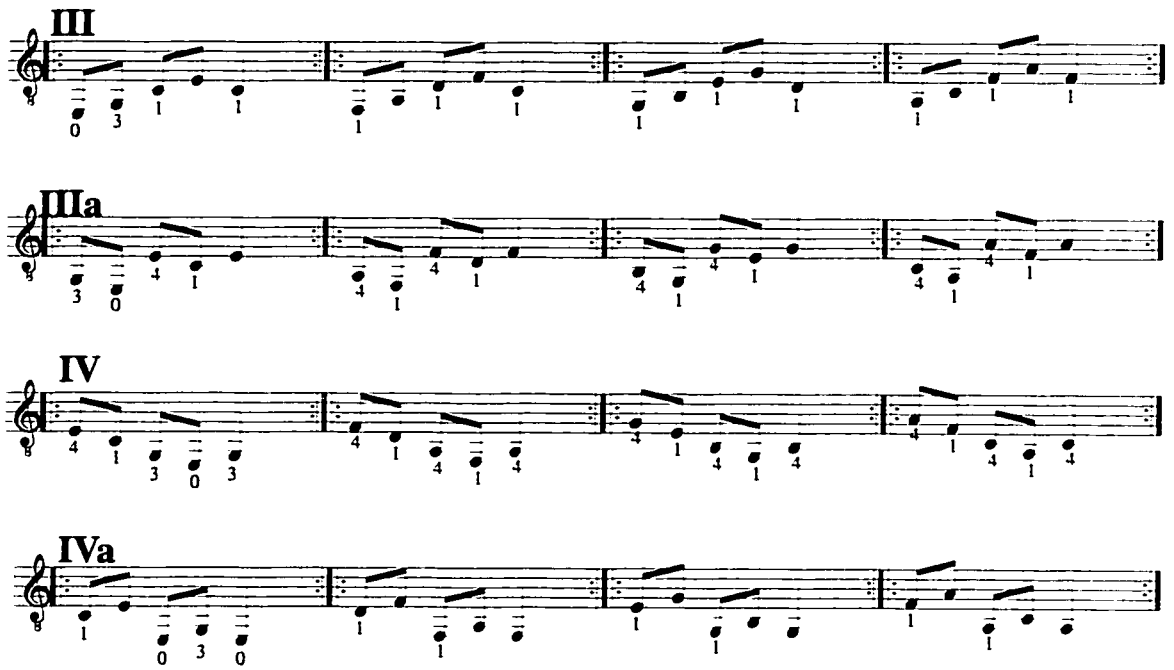
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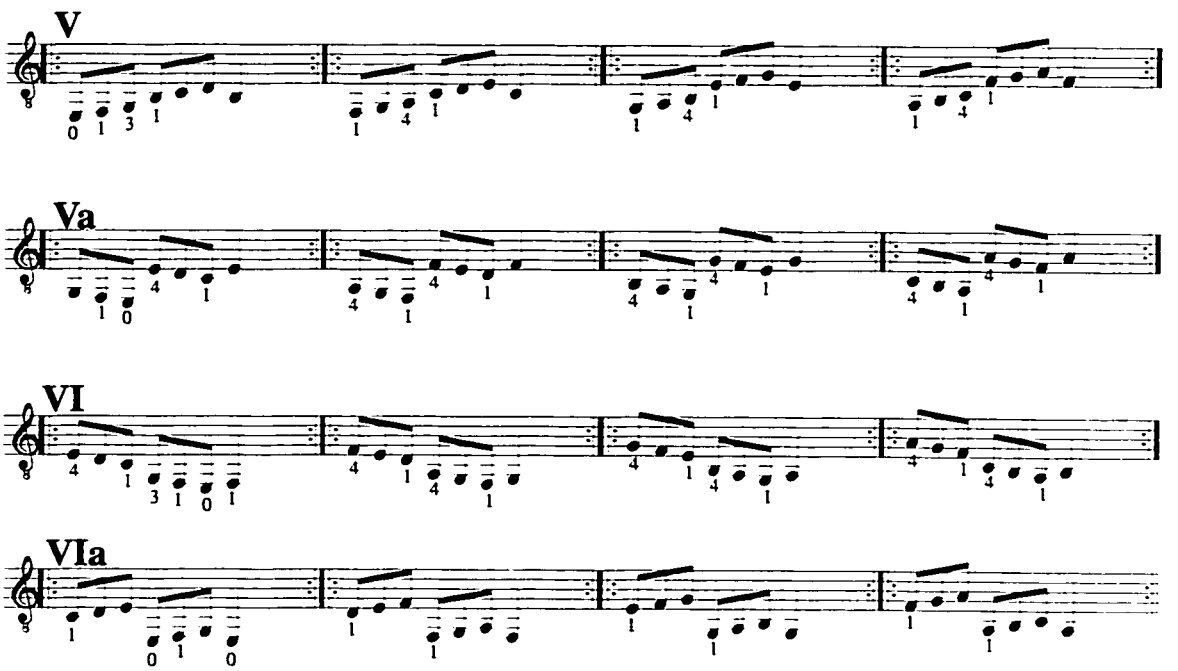
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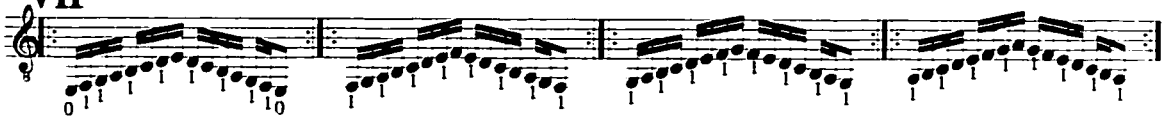

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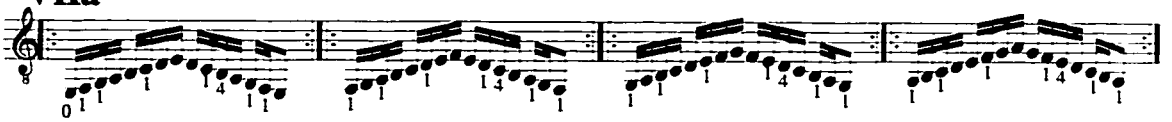

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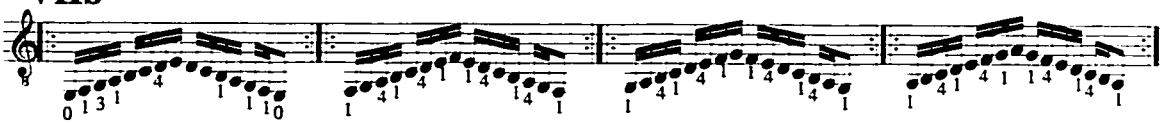

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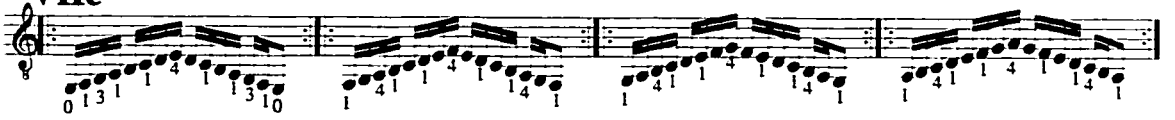

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